redis-3.0-annotated Scan Report

Project Name	redis-3.0-annotated
Scan Start	Saturday, June 22, 2024 12:30:05 AM
Preset	Checkmarx Default
Scan Time	01h:32m:27s
Lines Of Code Scanned	42009
Files Scanned	28
Report Creation Time	Saturday, June 22, 2024 1:06:27 AM
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083
Team	CxServer
Checkmarx Version	8.7.0
Scan Type	Full
Source Origin	LocalPath
Density	2/100 (Vulnerabilities/LOC)
Visibility	Public

Filter Settings

Severity

Included: High, Medium, Low, Information

Excluded: None

Result State

Included: Confirmed, Not Exploitable, To Verify, Urgent, Proposed Not Exploitable

Excluded: None

Assigned to

Included: All

Categories

Included:

Uncategorized	All
Custom	All
PCI DSS v3.2	All
OWASP Top 10 2013	All
FISMA 2014	All
NIST SP 800-53	All
OWASP Top 10 2017	All
OWASP Mobile Top 10 2016	All

Excluded:

Uncategorized	None
Custom	None
PCI DSS v3.2	None
OWASP Top 10 2013	None
FISMA 2014	None

NIST SP 800-53	None
OWASP Top 10 2017	None
OWASP Mobile Top 10 2016	None

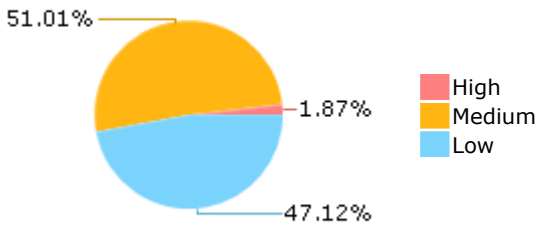
Results Limit

Results limit per query was set to 50

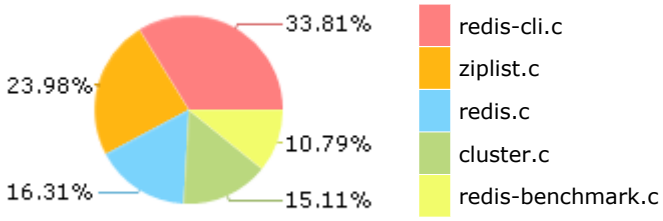
Selected Queries

Selected queries are listed in Result Summary

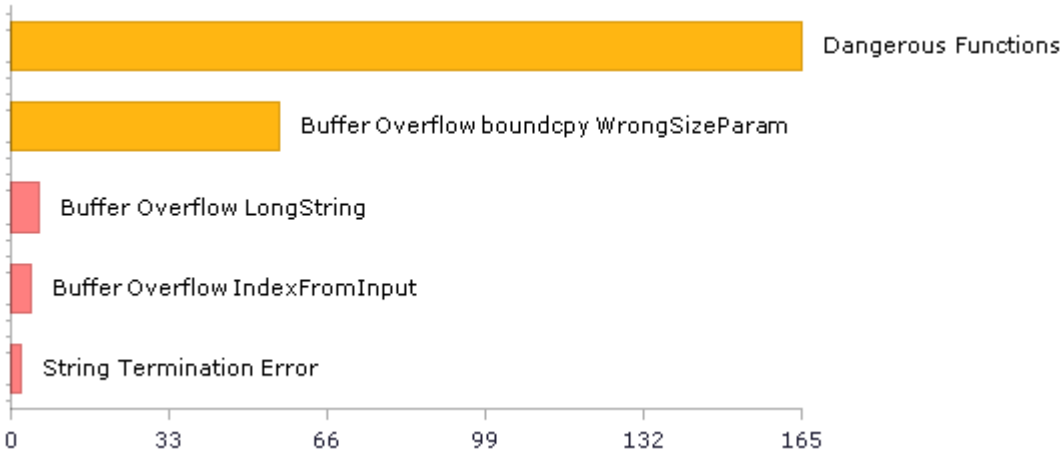
Result Summary



Most Vulnerable Files



Top 5 Vulnerabilities



Scan Summary - OWASP Top 10 2017

Further details and elaboration about vulnerabilities and risks can be found at: OWASP Top 10 2017

Category	Threat Agent	Exploitability	Weakness Prevalence	Weakness Detectability	Technical Impact	Business Impact	Issues Found	Best Fix Locations
A1-Injection	App. Specific	EASY	COMMON	EASY	SEVERE	App. Specific	99	84
A2-Broken Authentication	App. Specific	EASY	COMMON	AVERAGE	SEVERE	App. Specific	105	105
A3-Sensitive Data Exposure	App. Specific	AVERAGE	WIDESPREAD	AVERAGE	SEVERE	App. Specific	29	29
A4-XML External Entities (XXE)	App. Specific	AVERAGE	COMMON	EASY	SEVERE	App. Specific	0	0
A5-Broken Access Control*	App. Specific	AVERAGE	COMMON	AVERAGE	SEVERE	App. Specific	0	0
A6-Security Misconfiguration	App. Specific	EASY	WIDESPREAD	EASY	MODERATE	App. Specific	0	0
A7-Cross-Site Scripting (XSS)	App. Specific	EASY	WIDESPREAD	EASY	MODERATE	App. Specific	0	0
A8-Insecure Deserialization	App. Specific	DIFFICULT	COMMON	AVERAGE	SEVERE	App. Specific	0	0
A9-Using Components with Known Vulnerabilities*	App. Specific	AVERAGE	WIDESPREAD	AVERAGE	MODERATE	App. Specific	165	165
A10-Insufficient Logging & Monitoring	App. Specific	AVERAGE	WIDESPREAD	DIFFICULT	MODERATE	App. Specific	0	0

***** Project scan results do not include all relevant queries. Presets and\or Filters should be changed to include all relevant standard queries.

Scan Summary - OWASP Top 10 2013

Further details and elaboration about vulnerabilities and risks can be found at: OWASP Top 10 2013

Category	Threat Agent	Attack Vectors	Weakness Prevalence	Weakness Detectability	Technical Impact	Business Impact	Issues Found	Best Fix Locations
A1-Injection	EXTERNAL, INTERNAL, ADMIN USERS	EASY	COMMON	AVERAGE	SEVERE	ALL DATA	0	0
A2-Broken Authentication and Session Management	EXTERNAL, INTERNAL USERS	AVERAGE	WIDESPREAD	AVERAGE	SEVERE	AFFECTED DATA AND FUNCTIONS	0	0
A3-Cross-Site Scripting (XSS)	EXTERNAL, INTERNAL, ADMIN USERS	AVERAGE	VERY WIDESPREAD	EASY	MODERATE	AFFECTED DATA AND SYSTEM	0	0
A4-Insecure Direct Object References	SYSTEM USERS	EASY	COMMON	EASY	MODERATE	EXPOSED DATA	0	0
A5-Security Misconfiguration	EXTERNAL, INTERNAL, ADMIN USERS	EASY	COMMON	EASY	MODERATE	ALL DATA AND SYSTEM	0	0
A6-Sensitive Data Exposure	EXTERNAL, INTERNAL, ADMIN USERS, USERS BROWSERS	DIFFICULT	UNCOMMON	AVERAGE	SEVERE	EXPOSED DATA	0	0
A7-Missing Function Level Access Control*	EXTERNAL, INTERNAL USERS	EASY	COMMON	AVERAGE	MODERATE	EXPOSED DATA AND FUNCTIONS	0	0
A8-Cross-Site Request Forgery (CSRF)	USERS BROWSERS	AVERAGE	COMMON	EASY	MODERATE	AFFECTED DATA AND FUNCTIONS	0	0
A9-Using Components with Known Vulnerabilities*	EXTERNAL USERS, AUTOMATED TOOLS	AVERAGE	WIDESPREAD	DIFFICULT	MODERATE	AFFECTED DATA AND FUNCTIONS	165	165
A10-Unvalidated Redirects and Forwards	USERS BROWSERS	AVERAGE	WIDESPREAD	DIFFICULT	MODERATE	AFFECTED DATA AND FUNCTIONS	0	0

* Project scan results do not include all relevant queries. Presets and\or Filters should be changed to include all relevant standard queries.

Scan Summary - PCI DSS v3.2

Category	Issues Found	Best Fix Locations
PCI DSS (3.2) - 6.5.1 - Injection flaws - particularly SQL injection	0	0
PCI DSS (3.2) - 6.5.2 - Buffer overflows	112	106
PCI DSS (3.2) - 6.5.3 - Insecure cryptographic storage	0	0
PCI DSS (3.2) - 6.5.4 - Insecure communications	0	0
PCI DSS (3.2) - 6.5.5 - Improper error handling*	0	0
PCI DSS (3.2) - 6.5.7 - Cross-site scripting (XSS)	0	0
PCI DSS (3.2) - 6.5.8 - Improper access control	0	0
PCI DSS (3.2) - 6.5.9 - Cross-site request forgery	0	0
PCI DSS (3.2) - 6.5.10 - Broken authentication and session management	0	0

***** Project scan results do not include all relevant queries. Presets and\or Filters should be changed to include all relevant standard queries.

Scan Summary - FISMA 2014

Category	Description	Issues Found	Best Fix Locations
Access Control	Organizations must limit information system access to authorized users, processes acting on behalf of authorized users, or devices (including other information systems) and to the types of transactions and functions that authorized users are permitted to exercise.	7	7
Audit And Accountability*	Organizations must: (i) create, protect, and retain information system audit records to the extent needed to enable the monitoring, analysis, investigation, and reporting of unlawful, unauthorized, or inappropriate information system activity; and (ii) ensure that the actions of individual information system users can be uniquely traced to those users so they can be held accountable for their actions.	0	0
Configuration Management	Organizations must: (i) establish and maintain baseline configurations and inventories of organizational information systems (including hardware, software, firmware, and documentation) throughout the respective system development life cycles; and (ii) establish and enforce security configuration settings for information technology products employed in organizational information systems.	27	17
Identification And Authentication*	Organizations must identify information system users, processes acting on behalf of users, or devices and authenticate (or verify) the identities of those users, processes, or devices, as a prerequisite to allowing access to organizational information systems.	98	98
Media Protection	Organizations must: (i) protect information system media, both paper and digital; (ii) limit access to information on information system media to authorized users; and (iii) sanitize or destroy information system media before disposal or release for reuse.	29	29
System And Communications Protection	Organizations must: (i) monitor, control, and protect organizational communications (i.e., information transmitted or received by organizational information systems) at the external boundaries and key internal boundaries of the information systems; and (ii) employ architectural designs, software development techniques, and systems engineering principles that promote effective information security within organizational information systems.	0	0
System And Information Integrity	Organizations must: (i) identify, report, and correct information and information system flaws in a timely manner; (ii) provide protection from malicious code at appropriate locations within organizational information systems; and (iii) monitor information system security alerts and advisories and take appropriate actions in response.	25	25

***** Project scan results do not include all relevant queries. Presets and\or Filters should be changed to include all relevant standard queries.

Scan Summary - NIST SP 800-53

Category	Issues Found	Best Fix Locations
AC-12 Session Termination (P2)	0	0
AC-3 Access Enforcement (P1)	132	122
AC-4 Information Flow Enforcement (P1)	0	0
AC-6 Least Privilege (P1)	0	0
AU-9 Protection of Audit Information (P1)	0	0
CM-6 Configuration Settings (P2)	0	0
IA-5 Authenticator Management (P1)	0	0
IA-6 Authenticator Feedback (P2)	0	0
IA-8 Identification and Authentication (Non-Organizational Users) (P1)	0	0
SC-12 Cryptographic Key Establishment and Management (P1)	0	0
SC-13 Cryptographic Protection (P1)	0	0
SC-17 Public Key Infrastructure Certificates (P1)	0	0
SC-18 Mobile Code (P2)	0	0
SC-23 Session Authenticity (P1)*	0	0
SC-28 Protection of Information at Rest (P1)	29	29
SC-4 Information in Shared Resources (P1)	0	0
SC-5 Denial of Service Protection (P1)*	61	40
SC-8 Transmission Confidentiality and Integrity (P1)	0	0
SI-10 Information Input Validation (P1)*	80	74
SI-11 Error Handling (P2)*	38	38
SI-15 Information Output Filtering (P0)	0	0
SI-16 Memory Protection (P1)	1	1

***** Project scan results do not include all relevant queries. Presets and\or Filters should be changed to include all relevant standard queries.

Scan Summary - OWASP Mobile Top 10 2016

Category	Description	Issues Found	Best Fix Locations
M1-Improper Platform Usage	This category covers misuse of a platform feature or failure to use platform security controls. It might include Android intents, platform permissions, misuse of TouchID, the Keychain, or some other security control that is part of the mobile operating system. There are several ways that mobile apps can experience this risk.	0	0
M2-Insecure Data Storage	This category covers insecure data storage and unintended data leakage.	0	0
M3-Insecure Communication	This category covers poor handshaking, incorrect SSL versions, weak negotiation, cleartext communication of sensitive assets, etc.	0	0
M4-Insecure Authentication	This category captures notions of authenticating the end user or bad session management. This can include: -Failing to identify the user at all when that should be required -Failure to maintain the user's identity when it is required -Weaknesses in session management	0	0
M5-Insufficient Cryptography	The code applies cryptography to a sensitive information asset. However, the cryptography is insufficient in some way. Note that anything and everything related to TLS or SSL goes in M3. Also, if the app fails to use cryptography at all when it should, that probably belongs in M2. This category is for issues where cryptography was attempted, but it wasnt done correctly.	0	0
M6-Insecure Authorization	This is a category to capture any failures in authorization (e.g., authorization decisions in the client side, forced browsing, etc.). It is distinct from authentication issues (e.g., device enrolment, user identification, etc.). If the app does not authenticate users at all in a situation where it should (e.g., granting anonymous access to some resource or service when authenticated and authorized access is required), then that is an authentication failure not an authorization failure.	0	0
M7-Client Code Quality	This category is the catch-all for code-level implementation problems in the mobile client. That's distinct from server-side coding mistakes. This would capture things like buffer overflows, format string vulnerabilities, and various other code-level mistakes where the solution is to rewrite some code that's running on the mobile device.	0	0
M8-Code Tampering	This category covers binary patching, local resource modification, method hooking, method swizzling, and dynamic memory modification. Once the application is delivered to the mobile device, the code and data resources are resident there. An attacker can either directly modify the code, change the contents of memory dynamically, change or replace the system APIs that the application uses, or	0	0

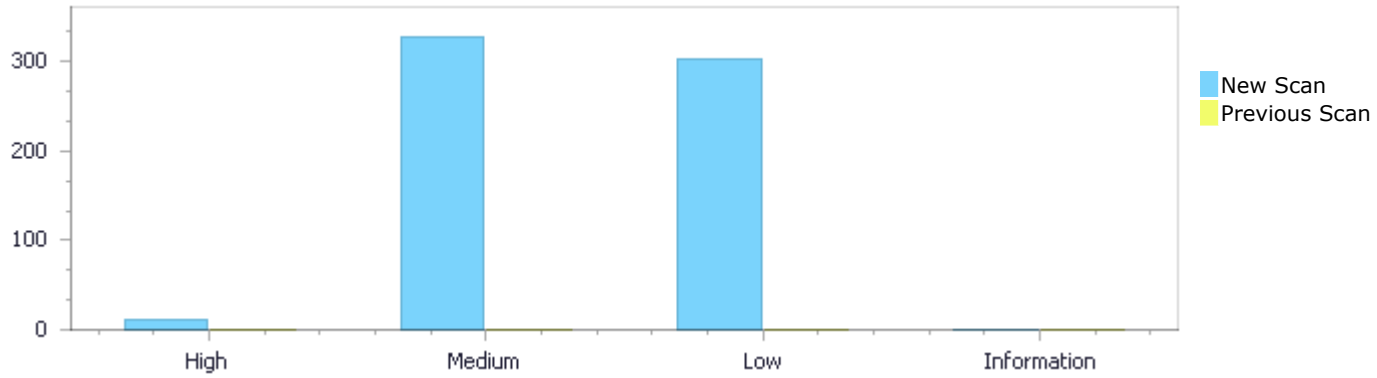
	modify the application's data and resources. This can provide the attacker a direct method of subverting the intended use of the software for personal or monetary gain.		
M9-Reverse Engineering	This category includes analysis of the final core binary to determine its source code, libraries, algorithms, and other assets. Software such as IDA Pro, Hopper, otool, and other binary inspection tools give the attacker insight into the inner workings of the application. This may be used to exploit other nascent vulnerabilities in the application, as well as revealing information about back end servers, cryptographic constants and ciphers, and intellectual property.	0	0
M10-Extraneous Functionality	Often, developers include hidden backdoor functionality or other internal development security controls that are not intended to be released into a production environment. For example, a developer may accidentally include a password as a comment in a hybrid app. Another example includes disabling of 2-factor authentication during testing.	0	0

Scan Summary - Custom

Category	Issues Found	Best Fix Locations
Must audit	0	0
Check	0	0
Optional	0	0

Results Distribution By Status First scan of the project

	High	Medium	Low	Information	Total
New Issues	12	328	303	0	643
Recurrent Issues	0	0	0	0	0
Total	12	328	303	0	643
Fixed Issues	0	0	0	0	0



Results Distribution By State

	High	Medium	Low	Information	Total
Confirmed	0	0	0	0	0
Not Exploitable	0	0	0	0	0
To Verify	12	328	303	0	643
Urgent	0	0	0	0	0
Proposed Not Exploitable	0	0	0	0	0
Total	12	328	303	0	643

Result Summary

Vulnerability Type	Occurrences	Severity
Buffer Overflow LongString	6	High
Buffer Overflow IndexFromInput	4	High
String Termination Error	2	High
Dangerous Functions	165	Medium
Buffer Overflow boundcpy WrongSizeParam	56	Medium

Integer Overflow	25	Medium
Use of Zero Initialized Pointer	25	Medium
MemoryFree on StackVariable	18	Medium
Memory Leak	9	Medium
Char Overflow	8	Medium
Divide By Zero	8	Medium
Buffer Overflow AddressOfLocalVarReturned	6	Medium
Use of Uninitialized Variable	6	Medium
Double Free	1	Medium
Stored Buffer Overflow boundcpy	1	Medium
Improper Resource Access Authorization	98	Low
Unchecked Return Value	38	Low
Unchecked Array Index	29	Low
Use of Insufficiently Random Values	29	Low
Exposure of System Data to Unauthorized Control Sphere	27	Low
Use of Sizeof On a Pointer Type	25	Low
NULL Pointer Dereference	15	Low
TOCTOU	15	Low
Sizeof Pointer Argument	11	Low
Heuristic 2nd Order Buffer Overflow read	7	Low
Incorrect Permission Assignment For Critical Resources	7	Low
Heuristic Buffer Overflow malloc	2	Low

10 Most Vulnerable Files

High and Medium Vulnerabilities

File Name	Issues Found
redis-3.0-annotated/ziplist.c	53
redis-3.0-annotated/cluster.c	46
redis-3.0-annotated/redis-cli.c	39
redis-3.0-annotated/redis-benchmark.c	31
redis-3.0-annotated/redis.c	29
redis-3.0-annotated/sds.c	17
redis-3.0-annotated/util.c	17
redis-3.0-annotated/hyperloglog.c	15
redis-3.0-annotated/scripting.c	14
redis-3.0-annotated/t_zset.c	12

Scan Results Details

Buffer Overflow LongString

Query Path:
CPP\Cx\CPP Buffer Overflow\Buffer Overflow LongString Version:1

Categories

PCI DSS v3.2: PCI DSS (3.2) - 6.5.2 - Buffer overflows
NIST SP 800-53: SI-10 Information Input Validation (P1)
OWASP Top 10 2017: A1-Injection

Description

Buffer Overflow LongString\Path 1:

Severity	High
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=1
Status	New

The size of the buffer used by scriptingEnableGlobalsProtection in s, at line 681 of redis-3.0-annotated/scripting.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that scriptingEnableGlobalsProtection passes to "mt.__newindex = function (t, n, v)\n", at line 681 of redis-3.0-annotated/scripting.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	690	690
Object	"mt.__newindex = function (t, n, v)\n"	s

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method void scriptingEnableGlobalsProtection(lua_State *lua) {

```
....
690.      s[j++]="mt.__newindex = function (t, n, v)\n";
```

Buffer Overflow LongString\Path 2:

Severity	High
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=2
Status	New

The size of the buffer used by scriptingEnableGlobalsProtection in s, at line 681 of redis-3.0-annotated/scripting.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that scriptingEnableGlobalsProtection passes to " local w = debug.getinfo(2, \"S\").what\n", at line 681 of redis-3.0-annotated/scripting.c, to overwrite the target buffer.

	Source	Destination

File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	692	692
Object	" local w = debug.getinfo(2, \"S\").what\n"	s

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method void scriptingEnableGlobalsProtection(lua_State *lua) {

```
....
692.        s[j++]="    local w = debug.getinfo(2, \"S\").what\n";
```

Buffer Overflow LongString\Path 3:

Severity	High
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=3
Status	New

The size of the buffer used by scriptingEnableGlobalsProtection in s, at line 681 of redis-3.0-annotated/scripting.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that scriptingEnableGlobalsProtection passes to " if w ~= \"main\" and w ~= \"C\" then\n", at line 681 of redis-3.0-annotated/scripting.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	693	693
Object	" if w ~= \"main\" and w ~= \"C\" then\n"	s

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method void scriptingEnableGlobalsProtection(lua_State *lua) {

```
....
693.        s[j++]="    if w ~= \"main\" and w ~= \"C\" then\n";
```

Buffer Overflow LongString\Path 4:

Severity	High
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=4
Status	New

The size of the buffer used by scriptingEnableGlobalsProtection in s, at line 681 of redis-3.0-annotated/scripting.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that scriptingEnableGlobalsProtection passes to " error(\"Script

attempted to create global variable '\"..tostring(n)..\"'\", 2)\n", at line 681 of redis-3.0-annotated/scripting.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	694	694
Object	" error(\"Script attempted to create global variable '\"..tostring(n)..\"'\", 2)\n"	s

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method void scriptingEnableGlobalsProtection(lua_State *lua) {

```
....
694.      s[j++]="      error(\"Script attempted to create global
variable '\"..tostring(n)..\"'\", 2)\n";
```

Buffer Overflow LongString\Path 5:

Severity High
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=5
Status New

The size of the buffer used by scriptingEnableGlobalsProtection in s, at line 681 of redis-3.0-annotated/scripting.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that scriptingEnableGlobalsProtection passes to " if debug.getinfo(2) and debug.getinfo(2, \"S\").what ~= \"C\" then\n", at line 681 of redis-3.0-annotated/scripting.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	700	700
Object	" if debug.getinfo(2) and debug.getinfo(2, \"S\").what ~= \"C\" then\n"	s

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method void scriptingEnableGlobalsProtection(lua_State *lua) {

```
....
700.      s[j++]="  if debug.getinfo(2) and debug.getinfo(2, \"S\").what
~= \"C\" then\n";
```

Buffer Overflow LongString\Path 6:

Severity High
Result State To Verify
Online Results http://WIN-

	BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=6
Status	New

The size of the buffer used by scriptingEnableGlobalsProtection in s, at line 681 of redis-3.0-annotated/scripting.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that scriptingEnableGlobalsProtection passes to " error(\"Script attempted to access unexisting global variable '\"..tostring(n)..\"'\", 2)\n", at line 681 of redis-3.0-annotated/scripting.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	701	701
Object	" error(\"Script attempted to access unexisting global variable '\"..tostring(n)..\"'\", 2)\n"	s

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method void scriptingEnableGlobalsProtection(lua_State *lua) {

```
....
701.      s[j++]="    error(\"Script attempted to access unexisting
global variable '\"..tostring(n)..\"'\", 2)\n";
```

Buffer Overflow IndexFromInput

Query Path:
CPP\Cx\CPP Buffer Overflow\Buffer Overflow IndexFromInput Version:1

Categories

OWASP Top 10 2017: A1-Injection

Description

Buffer Overflow IndexFromInput\Path 1:

Severity	High
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=7
Status	New

The size of the buffer used by parseOptions in Increment, at line 466 of redis-3.0-annotated/redis-benchmark.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that main passes to argv, at line 617 of redis-3.0-annotated/redis-benchmark.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	617	523
Object	argv	Increment

Code Snippet

File Name redis-3.0-annotated/redis-benchmark.c
Method int main(int argc, const char **argv) {

```
....
617.  int main(int argc, const char **argv) {
```

File Name redis-3.0-annotated/redis-benchmark.c

Method int parseOptions(int argc, const char **argv) {

```
....
523.              config.tests = sdscat(config.tests,(char*)argv[++i]);
```

Buffer Overflow IndexFromInput\Path 2:

Severity	High
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=8
Status	New

The size of the buffer used by noninteractive in argc, at line 952 of redis-3.0-annotated/redis-cli.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that main passes to argc, at line 1846 of redis-3.0-annotated/redis-cli.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1846	956
Object	argc	argc

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method int main(int argc, char **argv) {

```
....
1846.  int main(int argc, char **argv) {
```

File Name redis-3.0-annotated/redis-cli.c

Method static int noninteractive(int argc, char **argv) {

```
....
956.          argv[argc] = readArgFromStdin();
```

Buffer Overflow IndexFromInput\Path 3:

Severity	High
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=9

Status	New

The size of the buffer used by clusterLoadConfig in slot, at line 105 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterLoadConfig passes to line, at line 105 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	147	289
Object	line	slot

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterLoadConfig(char *filename) {

```
....
147.      while(fgets(line,maxline,fp) != NULL) {
....
289.                      server.cluster->migrating_slots_to[slot] = cn;
```

Buffer Overflow IndexFromInput\Path 4:

Severity	High
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=10
Status	New

The size of the buffer used by clusterLoadConfig in slot, at line 105 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterLoadConfig passes to line, at line 105 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	147	291
Object	line	slot

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterLoadConfig(char *filename) {

```
....
147.      while(fgets(line,maxline,fp) != NULL) {
....
291.                      server.cluster->importing_slots_from[slot] =
cn;
```

String Termination Error

Query Path:

Categories

PCI DSS v3.2: PCI DSS (3.2) - 6.5.2 - Buffer overflows
NIST SP 800-53: SI-10 Information Input Validation (P1)
OWASP Top 10 2017: A1-Injection

Description

String Termination Error\Path 1:

Severity	High
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=191
Status	New

	Source	Destination
File	redis-3.0-annotated/zmalloc.c	redis-3.0-annotated/zmalloc.c
Line	271	280
Object	buf	strchr

Code Snippet
File Name redis-3.0-annotated/zmalloc.c
Method size_t zmalloc_get_rss(void) {

```
....
271.      if (read(fd,buf,4096) <= 0) {
....
280.          p = strchr(p,' ');
```

String Termination Error\Path 2:

Severity	High
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=192
Status	New

	Source	Destination
File	redis-3.0-annotated/zmalloc.c	redis-3.0-annotated/zmalloc.c
Line	271	284
Object	buf	strchr

Code Snippet
File Name redis-3.0-annotated/zmalloc.c
Method size_t zmalloc_get_rss(void) {

```
....
271.      if (read(fd,buf,4096) <= 0) {
....
284.      x = strchr(p,' ');
```

Dangerous Functions

Query Path:
CPP\Cx\CPP Medium Threat\Dangerous Functions System error. Please contact your Checkmarx Administrator:1

Categories

OWASP Top 10 2013: A9-Using Components with Known Vulnerabilities
OWASP Top 10 2017: A9-Using Components with Known Vulnerabilities

Description

Dangerous Functions\Path 1:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=290
Status	New

The dangerous function, memcpy, was found in use at line 323 in redis-3.0-annotated/bitops.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/bitops.c	redis-3.0-annotated/bitops.c
Line	426	426
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/bitops.c
Method void bitopCommand(redisClient *c) {

```
....
426.              memcpy(lp,src,sizeof(unsigned long*)*numkeys);
```

Dangerous Functions\Path 2:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=291
Status	New

The dangerous function, memcpy, was found in use at line 323 in redis-3.0-annotated/bitops.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

Source	Destination

File	redis-3.0-annotated/bitops.c	redis-3.0-annotated/bitops.c
Line	427	427
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/bitops.c
Method void bitopCommand(redisClient *c) {

```
....
427.                memcpy(res,src[0],minlen);
```

Dangerous Functions\Path 3:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=292
Status	New

The dangerous function, memcpy, was found in use at line 105 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	193	193
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterLoadConfig(char *filename) {

```
....
193.            memcpy(n->ip,argv[1],strlen(argv[1])+1);
```

Dangerous Functions\Path 4:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=293
Status	New

The dangerous function, memcpy, was found in use at line 721 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	726	726

Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method clusterNode *createClusterNode(char *nodename, int flags) {

```
....
726.          memcpy(node->name, nodename, REDIS_CLUSTER_NAMELEN);
```

Dangerous Functions\Path 5:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=294
Status	New

The dangerous function, memcpy, was found in use at line 1075 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	1084	1084
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterRenameNode(clusterNode *node, char *newname) {

```
....
1084.      memcpy(node->name, newname, REDIS_CLUSTER_NAMELEN);
```

Dangerous Functions\Path 6:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=295
Status	New

The dangerous function, memcpy, was found in use at line 1386 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	1437	1437
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterStartHandshake(char *ip, int port) {

```
....
1437.       memcpy(n->ip,norm_ip,sizeof(n->ip));
```

Dangerous Functions\Path 7:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=296
Status	New

The dangerous function, memcpy, was found in use at line 1599 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	1617	1617
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int nodeUpdateAddressIfNeeded(clusterNode *node, clusterLink *link, int port) {

```
....
1617.       memcpy(node->ip,ip,sizeof(ip));
```

Dangerous Functions\Path 8:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=297
Status	New

The dangerous function, memcpy, was found in use at line 2655 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2688	2688
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterBuildMessageHdr(clusterMsg *hdr, int type) {

```
....
2688.       memcpy(hdr->sender,myself->name,REDIS_CLUSTER_NAMELEN);
```

Dangerous Functions\Path 9:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=298
Status	New

The dangerous function, memcpy, was found in use at line 2655 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2691	2691
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterBuildMessageHdr(clusterMsg *hdr, int type) {

```
....
2691.       memcpy(hdr->myslots,master->slots,sizeof(hdr->myslots));
```

Dangerous Functions\Path 10:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=299
Status	New

The dangerous function, memcpy, was found in use at line 2655 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2698	2698
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterBuildMessageHdr(clusterMsg *hdr, int type) {

```
....
2698.           memcpy(hdr->slaveof,myself->slaveof->name,
REDIS_CLUSTER_NAMELEN);
```

Dangerous Functions\Path 11:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=300
Status	New

The dangerous function, memcpy, was found in use at line 2746 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2823	2823
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterSendPing(clusterLink *link, int type) {

```
....
2823.           memcpy(gossip->nodename,this-
>name,REDIS_CLUSTER_NAMELEN);
```

Dangerous Functions\Path 12:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=301
Status	New

The dangerous function, memcpy, was found in use at line 2746 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2829	2829
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterSendPing(clusterLink *link, int type) {

```
....
2829.           memcpy(gossip->ip,this->ip,sizeof(this->ip));
```

Dangerous Functions\Path 13:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=302
Status	New

The dangerous function, memcpy, was found in use at line 2908 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2938	2938
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterSendPublish(clusterLink *link, robj *channel, robj *message) {

```
....
2938.           memcpy(payload,hdr,sizeof(*hdr));
```

Dangerous Functions\Path 14:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=303
Status	New

The dangerous function, memcpy, was found in use at line 2908 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2943	2943
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterSendPublish(clusterLink *link, robj *channel, robj *message) {

```
....
2943.       memcpy(hdr->data.publish.msg.bulk_data,channel-
>ptr,sdslen(channel->ptr));
```

Dangerous Functions\Path 15:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=304
Status	New

The dangerous function, memcpy, was found in use at line 2908 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2944	2944
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterSendPublish(clusterLink *link, robj *channel, robj *message) {

```
....
2944.       memcpy(hdr->data.publish.msg.bulk_data+sdslen(channel->ptr),
```

Dangerous Functions\Path 16:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=305
Status	New

The dangerous function, memcpy, was found in use at line 2974 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2982	2982
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterSendFail(char *nodename) {

```
....
2982.       memcpy(hdr-
>data.fail.about.nodename,nodename,REDIS_CLUSTER_NAMELEN);
```

Dangerous Functions\Path 17:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=306
Status	New

The dangerous function, memcpy, was found in use at line 2995 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	3005	3005
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterSendUpdate(clusterLink *link, clusterNode *node) {

```
....
3005.       memcpy(hdr->data.update.nodecfg.nodename,node-
>name,REDIS_CLUSTER_NAMELEN);
```

Dangerous Functions\Path 18:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=307
Status	New

The dangerous function, memcpy, was found in use at line 2995 in redis-3.0-annotated/cluster.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	3011	3011
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterSendUpdate(clusterLink *link, clusterNode *node) {

```
....
3011.       memcpy(hdr->data.update.nodecfg.slots,node-
>slots,sizeof(node->slots));
```

Dangerous Functions\Path 19:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=308
Status	New

The dangerous function, memcpy, was found in use at line 638 in redis-3.0-annotated/hyperloglog.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	822	822
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllSparseAdd(robj *o, unsigned char *ele, size_t elesize) {

```
....
822.        memcpy(p,seq,seqlen);
```

Dangerous Functions\Path 20:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=309
Status	New

The dangerous function, memcpy, was found in use at line 1089 in redis-3.0-annotated/hyperloglog.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1116	1116
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method robj *createHLLObject(void) {

```
....
1116.       memcpy(hdr->magic,"HYLL",4);
```

Dangerous Functions\Path 21:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=310
Status	New

The dangerous function, memcpy, was found in use at line 68 in redis-3.0-annotated/intset.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	79	79
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/intset.c
Method static int64_t _intsetGetEncoded(intset *is, int pos, uint8_t enc) {

```
....
79.           memcpy(&v64,((int64_t*)is->contents)+pos,sizeof(v64));
```

Dangerous Functions\Path 22:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=311
Status	New

The dangerous function, memcpy, was found in use at line 68 in redis-3.0-annotated/intset.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	83	83
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/intset.c
Method static int64_t _intsetGetEncoded(intset *is, int pos, uint8_t enc) {

```
....
83.          memcpy(&v32,((int32_t*)is->contents)+pos,sizeof(v32));
```

Dangerous Functions\Path 23:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=312
Status	New

The dangerous function, memcpy, was found in use at line 68 in redis-3.0-annotated/intset.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	87	87
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/intset.c
Method static int64_t _intsetGetEncoded(intset *is, int pos, uint8_t enc) {

```
....
87.          memcpy(&v16,((int16_t*)is->contents)+pos,sizeof(v16));
```

Dangerous Functions\Path 24:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=313
Status	New

The dangerous function, memcpy, was found in use at line 291 in redis-3.0-annotated/lua_struct.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/lua_struct.c	redis-3.0-annotated/lua_struct.c
Line	318	318
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/lua_struct.c
Method static int b_unpack (lua_State *L) {

```
....
318.          memcpy(&f, data+pos, size);
```

Dangerous Functions\Path 25:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=314
Status	New

The dangerous function, memcpy, was found in use at line 291 in redis-3.0-annotated/lua_struct.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/lua_struct.c	redis-3.0-annotated/lua_struct.c
Line	325	325
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/lua_struct.c
Method static int b_unpack (lua_State *L) {

```
....
325.          memcpy(&d, data+pos, size);
```

Dangerous Functions\Path 26:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=315
Status	New

The dangerous function, memcpy, was found in use at line 282 in redis-3.0-annotated/lvm.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/lvm.c	redis-3.0-annotated/lvm.c
Line	306	306
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/lvm.c
Method void luaV_concat (lua_State *L, int total, int last) {

```
....
306.          memcpy(buffer+tl, svalue(top-i), l);
```

Dangerous Functions\Path 27:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=316
Status	New

The dangerous function, memcpy, was found in use at line 75 in redis-3.0-annotated/multi.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/multi.c	redis-3.0-annotated/multi.c
Line	90	90
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/multi.c
Method void queueMultiCommand(redisClient *c) {

```
....
90.      memcpy(mc->argv,c->argv,sizeof(robj*)*c->argc);
```

Dangerous Functions\Path 28:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=317
Status	New

The dangerous function, memcpy, was found in use at line 1164 in redis-3.0-annotated/rdb.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	1440	1440
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/rdb.c
Method robj *rdbLoadObject(int rdbtype, rio *rdb) {

```
....
1440.          memcpy(o->ptr,aux->ptr,sdslen(aux->ptr));
```

Dangerous Functions\Path 29:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=318
Status	New

The dangerous function, memcpy, was found in use at line 2870 in redis-3.0-annotated/redis.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	2890	2890
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int time_independent_strcmp(char *a, char *b) {

```
....
2890.       memcpy(bufa,a,alen);
```

Dangerous Functions\Path 30:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=319
Status	New

The dangerous function, memcpy, was found in use at line 2870 in redis-3.0-annotated/redis.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	2891	2891
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int time_independent_strcmp(char *a, char *b) {

```
....
2891.       memcpy(bufb,b,blen);
```

Dangerous Functions\Path 31:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=320
Status	New

The dangerous function, memcpy, was found in use at line 605 in redis-3.0-annotated/redis-benchmark.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	611	611
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int test_is_selected(char *name) {

```
....
611.       memcpy(buf+1,name,l);
```

Dangerous Functions\Path 32:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=321
Status	New

The dangerous function, memcpy, was found in use at line 1175 in redis-3.0-annotated/redis-cli.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1288	1288
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1288.                           memcpy(echo+21,magic,20);
```

Dangerous Functions\Path 33:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=322
Status	New

The dangerous function, memcpy, was found in use at line 1175 in redis-3.0-annotated/redis-cli.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1289	1289
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1289.                           memcpy(obuf,echo,sizeof(echo)-1);
```

Dangerous Functions\Path 34:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=323
Status	New

The dangerous function, memcpy, was found in use at line 1610 in redis-3.0-annotated/redis-cli.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1621	1621
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static char *getInfoField(char *info, char *field) {

```
....
1621.       memcpy(result,p,(n1-p));
```

Dangerous Functions\Path 35:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=324
Status	New

The dangerous function, memcpy, was found in use at line 127 in redis-3.0-annotated/replication.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	144	144
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/replication.c
Method void feedReplicationBacklog(void *ptr, size_t len) {

```
....
144.
memcpy(server.repl_backlog+server.repl_backlog_idx,p,thislen);
```

Dangerous Functions\Path 36:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=325
Status	New

The dangerous function, memcpy, was found in use at line 947 in redis-3.0-annotated/replication.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	1080	1080
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/replication.c
Method void readSyncBulkPayload(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
1080.           memcpy(server.master->replrunid,
server.repl_master_runid,
```

Dangerous Functions\Path 37:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=326
Status	New

The dangerous function, memcpy, was found in use at line 1207 in redis-3.0-annotated/replication.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	1230	1230
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/replication.c
Method int slaveTryPartialResynchronization(int fd) {

```
....
1230.           memcpy(psync_offset,"-1",3);
```

Dangerous Functions\Path 38:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=327
Status	New

The dangerous function, memcpy, was found in use at line 1207 in redis-3.0-annotated/replication.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	1263	1263
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/replication.c
Method int slaveTryPartialResynchronization(int fd) {

```
....
1263.               memcpy(server.repl_master_runid, runid, offset-runid-
1);
```

Dangerous Functions\Path 39:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=328
Status	New

The dangerous function, memcpy, was found in use at line 235 in redis-3.0-annotated/scripting.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	278	278
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method int luaRedisGenericCommand(lua_State *lua, int raise_error) {

```
....
278.               memcpy(s,obj_s,obj_len+1);
```

Dangerous Functions\Path 40:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=329
Status	New

The dangerous function, memcpy, was found in use at line 51 in redis-3.0-annotated/sds.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	63	63
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/sds.c
Method sds sdsnewlen(const void *init, size_t initlen) {

```
....
63.          memcpy(sh->buf, init, initlen);
```

Dangerous Functions\Path 41:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=330
Status	New

The dangerous function, memcpy, was found in use at line 237 in redis-3.0-annotated/sds.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	244	244
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/sds.c
Method sds sdscatlen(sds s, const void *t, size_t len) {

```
....
244.      memcpy(s+curlen, t, len);
```

Dangerous Functions\Path 42:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=331
Status	New

The dangerous function, memcpy, was found in use at line 269 in redis-3.0-annotated/sds.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	279	279
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/sds.c
Method sds sdscpylen(sds s, const char *t, size_t len) {

```
....
279.        memcpy(s, t, len);
```

Dangerous Functions\Path 43:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=332
Status	New

The dangerous function, memcpy, was found in use at line 79 in redis-3.0-annotated/sort.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/sort.c	redis-3.0-annotated/sort.c
Line	136	136
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/sort.c
Method robj *lookupKeyByPattern(redisDb *db, robj *pattern, robj *subst) {

```
....
136.        memcpy(k,spat,prefixlen);
```

Dangerous Functions\Path 44:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=333
Status	New

The dangerous function, memcpy, was found in use at line 79 in redis-3.0-annotated/sort.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/sort.c	redis-3.0-annotated/sort.c
Line	137	137
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/sort.c
Method robj *lookupKeyByPattern(redisDb *db, robj *pattern, robj *subst) {

```
....
137.      memcpy(k+prefixlen,ssub,sublen);
```

Dangerous Functions\Path 45:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=334
Status	New

The dangerous function, memcpy, was found in use at line 79 in redis-3.0-annotated/sort.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/sort.c	redis-3.0-annotated/sort.c
Line	138	138
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/sort.c
Method robj *lookupKeyByPattern(redisDb *db, robj *pattern, robj *subst) {

```
....
138.      memcpy(k+prefixlen+sublen,p+1,postfixlen);
```

Dangerous Functions\Path 46:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=335
Status	New

The dangerous function, memcpy, was found in use at line 240 in redis-3.0-annotated/t_string.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/t_string.c	redis-3.0-annotated/t_string.c
Line	315	315
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/t_string.c
Method void setrangeCommand(redisClient *c) {

```
....
315.          memcpy((char*)o->ptr+offset,value,sdslen(value));
```

Dangerous Functions\Path 47:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=336
Status	New

The dangerous function, memcpy, was found in use at line 990 in redis-3.0-annotated/t_zset.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	1003	1003
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/t_zset.c
Method double zzlGetScore(unsigned char *sptr) {

```
....
1003.          memcpy(buf,vstr,vlen);
```

Dangerous Functions\Path 48:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=337
Status	New

The dangerous function, memcpy, was found in use at line 285 in redis-3.0-annotated/util.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	292	292
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/util.c
Method x2s(uintmax_t x, bool alt_form, bool uppercase, char *s, size_t *slen_p)

```
....
292.                memcpy(s, uppercase ? "0X" : "0x", 2);
```

Dangerous Functions\Path 49:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=338
Status	New

The dangerous function, memcpy, was found in use at line 298 in redis-3.0-annotated/util.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	497	497
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/util.c
Method malloc_vsnprintf(char *str, size_t size, const char *format, va_list ap)

```
....
497.                            APPEND_PADDED_S(s, slen, width,
left_justify);
```

Dangerous Functions\Path 50:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=339
Status	New

The dangerous function, memcpy, was found in use at line 298 in redis-3.0-annotated/util.c file. Such functions may expose information and allow an attacker to get full control over the host machine.

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	506	506
Object	memcpy	memcpy

Code Snippet
File Name redis-3.0-annotated/util.c
Method malloc_vsnprintf(char *str, size_t size, const char *format, va_list ap)

```
....
506.                            APPEND_PADDED_S(s, slen, width,
left_justify);
```

Buffer Overflow boundcpy WrongSizeParam

Query Path:
CPP\Cx\CPP Buffer Overflow\Buffer Overflow boundcpy WrongSizeParam System error. Please contact your Checkmarx Administrator:1

Categories

PCI DSS v3.2: PCI DSS (3.2) - 6.5.2 - Buffer overflows
OWASP Top 10 2017: A1-Injection

Description

Buffer Overflow boundcpy WrongSizeParam\Path 1:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=117
Status	New

The size of the buffer used by clusterStartHandshake in ->, at line 1386 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterStartHandshake passes to ->, at line 1386 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	1437	1437
Object	->	->

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterStartHandshake(char *ip, int port) {

```
....
1437.       memcpy(n->ip,norm_ip,sizeof(n->ip));
```

Buffer Overflow boundcpy WrongSizeParam\Path 2:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=118
Status	New

The size of the buffer used by nodeUpdateAddressIfNeeded in ip, at line 1599 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that nodeUpdateAddressIfNeeded passes to ip, at line 1599 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	1617	1617
Object	ip	ip

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int nodeUpdateAddressIfNeeded(clusterNode *node, clusterLink *link, int port) {

```
....
1617.       memcpy(node->ip,ip,sizeof(ip));
```

Buffer Overflow boundcpy WrongSizeParam\Path 3:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=119
Status	New

The size of the buffer used by clusterBuildMessageHdr in ->, at line 2655 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterBuildMessageHdr passes to ->, at line 2655 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2691	2691
Object	->	->

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterBuildMessageHdr(clusterMsg *hdr, int type) {

```
....
2691.       memcpy(hdr->myslots,master->slots,sizeof(hdr->myslots));
```

Buffer Overflow boundcpy WrongSizeParam\Path 4:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=120
Status	New

The size of the buffer used by clusterSendPublish in hdr, at line 2908 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterSendPublish passes to hdr, at line 2908 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2938	2938
Object	hdr	hdr

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterSendPublish(clusterLink *link, robj *channel, robj *message) {

```
....
2938.           memcpy(payload,hdr,sizeof(*hdr));
```

Buffer Overflow boundcpy WrongSizeParam\Path 5:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=121
Status	New

The size of the buffer used by clusterSendUpdate in ->, at line 2995 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterSendUpdate passes to ->, at line 2995 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	3011	3011
Object	->	->

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterSendUpdate(clusterLink *link, clusterNode *node) {

```
....
3011.       memcpy(hdr->data.update.nodecfg.slots,node-
>slots,sizeof(node->slots));
```

Buffer Overflow boundcpy WrongSizeParam\Path 6:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=122
Status	New

The size of the buffer used by readSyncBulkPayload in Namespace531742427, at line 947 of redis-3.0-annotated/replication.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that readSyncBulkPayload passes to Namespace531742427, at line 947 of redis-3.0-annotated/replication.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	1081	1081
Object	Namespace531742427	Namespace531742427

Code Snippet
File Name redis-3.0-annotated/replication.c
Method void readSyncBulkPayload(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
1081.               sizeof(server.repl_master_runid));
```

Buffer Overflow boundcpy WrongSizeParam\Path 7:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=123
Status	New

The size of the buffer used by zipPrevEncodeLength in len, at line 470 of redis-3.0-annotated/ziplist.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that zipPrevEncodeLength passes to len, at line 470 of redis-3.0-annotated/ziplist.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	489	489
Object	len	len

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method static unsigned int zipPrevEncodeLength(unsigned char *p, unsigned int len) {

```
....
489.                memcpy(p+1,&len,sizeof(len));
```

Buffer Overflow boundcpy WrongSizeParam\Path 8:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=124
Status	New

The size of the buffer used by zipPrevEncodeLengthForceLarge in len, at line 505 of redis-3.0-annotated/ziplist.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that zipPrevEncodeLengthForceLarge passes to len, at line 505 of redis-3.0-annotated/ziplist.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	513	513
Object	len	len

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method static void zipPrevEncodeLengthForceLarge(unsigned char *p, unsigned int len) {

```
....
513.      memcpy(p+1,&len,sizeof(len));
```

Buffer Overflow boundcpy WrongSizeParam\Path 9:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=125
Status	New

The size of the buffer used by zipSaveInteger in i16, at line 657 of redis-3.0-annotated/ziplist.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that zipSaveInteger passes to i16, at line 657 of redis-3.0-annotated/ziplist.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	666	666
Object	i16	i16

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method static void zipSaveInteger(unsigned char *p, int64_t value, unsigned char encoding) {

```
....
666.          memcpy(p,&i16,sizeof(i16));
```

Buffer Overflow boundcpy WrongSizeParam\Path 10:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=126
Status	New

The size of the buffer used by zipSaveInteger in i32, at line 657 of redis-3.0-annotated/ziplist.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that zipSaveInteger passes to i32, at line 657 of redis-3.0-annotated/ziplist.c, to overwrite the target buffer.

	Source	Destination

File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	674	674
Object	i32	i32

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method static void zipSaveInteger(unsigned char *p, int64_t value, unsigned char encoding) {

```
....
674.            memcpy(p,&i32,sizeof(i32));
```

Buffer Overflow boundcpy WrongSizeParam\Path 11:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=127
Status	New

The size of the buffer used by zipSaveInteger in i64, at line 657 of redis-3.0-annotated/ziplist.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that zipSaveInteger passes to i64, at line 657 of redis-3.0-annotated/ziplist.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	678	678
Object	i64	i64

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method static void zipSaveInteger(unsigned char *p, int64_t value, unsigned char encoding) {

```
....
678.            memcpy(p,&i64,sizeof(i64));
```

Buffer Overflow boundcpy WrongSizeParam\Path 12:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=128
Status	New

The size of the buffer used by clusterInit in ->, at line 445 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterInit passes to ->, at line 445 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination

File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	465	465
Object	->	->

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterInit(void) {

```
....
465.      memset(server.cluster->slots,0, sizeof(server.cluster-
>slots));
```

Buffer Overflow boundcpy WrongSizeParam\Path 13:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=129
Status	New

The size of the buffer used by *createClusterNode in ->, at line 721 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that *createClusterNode passes to ->, at line 721 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	734	734
Object	->	->

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method clusterNode *createClusterNode(char *nodename, int flags) {

```
....
734.      memset(node->slots,0,sizeof(node->slots));
```

Buffer Overflow boundcpy WrongSizeParam\Path 14:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=130
Status	New

The size of the buffer used by *createClusterNode in ->, at line 721 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that *createClusterNode passes to ->, at line 721 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination

File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	742	742
Object	->	->

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method clusterNode *createClusterNode(char *nodename, int flags) {

```
....
742.      memset(node->ip,0,sizeof(node->ip));
```

Buffer Overflow boundcpy WrongSizeParam\Path 15:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=131
Status	New

The size of the buffer used by clusterCloseAllSlots in ->, at line 4036 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterCloseAllSlots passes to ->, at line 4036 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	4038	4038
Object	->	->

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterCloseAllSlots(void) {

```
....
4038.          sizeof(server.cluster->migrating_slots_to));
```

Buffer Overflow boundcpy WrongSizeParam\Path 16:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=132
Status	New

The size of the buffer used by clusterCloseAllSlots in ->, at line 4036 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterCloseAllSlots passes to ->, at line 4036 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination

File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	4040	4040
Object	->	->

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterCloseAllSlots(void) {

```
....
4040.           sizeof(server.cluster->importing_slots_from));
```

Buffer Overflow boundcpy WrongSizeParam\Path 17:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=133
Status	New

The size of the buffer used by resetServerStats in Namespace733386138, at line 2032 of redis-3.0-annotated/redis.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that resetServerStats passes to Namespace733386138, at line 2032 of redis-3.0-annotated/redis.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	2044	2044
Object	Namespace733386138	Namespace733386138

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void resetServerStats(void) {

```
....
2044.
memset(server.ops_sec_samples,0,sizeof(server.ops_sec_samples));
```

Buffer Overflow boundcpy WrongSizeParam\Path 18:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=134
Status	New

The size of the buffer used by zuiNext in zsetopval, at line 2376 of redis-3.0-annotated/t_zset.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that zuiNext passes to zsetopval, at line 2376 of redis-3.0-annotated/t_zset.c, to overwrite the target buffer.

	Source	Destination

File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	2386	2386
Object	zsetopval	zsetopval

Code Snippet
File Name redis-3.0-annotated/t_zset.c
Method int zuiNext(zsetopsrc *op, zsetopval *val) {

```
....
2386.       memset(val,0,sizeof(zsetopval));
```

Buffer Overflow boundcpy WrongSizeParam\Path 19:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=135
Status	New

The size of the buffer used by main in v, at line 1834 of redis-3.0-annotated/ziplist.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that main passes to v, at line 1834 of redis-3.0-annotated/ziplist.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2122	2122
Object	v	v

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2122.               memset(v[i], 'a' + i, sizeof(v[0]));
```

Buffer Overflow boundcpy WrongSizeParam\Path 20:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=136
Status	New

The size of the buffer used by verify in zlentry, at line 1818 of redis-3.0-annotated/ziplist.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that verify passes to zlentry, at line 1818 of redis-3.0-annotated/ziplist.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c

Line	1824	1824
Object	zlentry	zlentry

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method void verify(unsigned char *zl, zlentry *e) {

```
....
1824.           memset(&e[i], 0, sizeof(zlentry));
```

Buffer Overflow boundcpy WrongSizeParam\Path 21:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=137
Status	New

The size of the buffer used by verify in zlentry, at line 1818 of redis-3.0-annotated/ziplist.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that verify passes to zlentry, at line 1818 of redis-3.0-annotated/ziplist.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1827	1827
Object	zlentry	zlentry

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method void verify(unsigned char *zl, zlentry *e) {

```
....
1827.           memset(&_e, 0, sizeof(zlentry));
```

Buffer Overflow boundcpy WrongSizeParam\Path 22:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=138
Status	New

The size of the buffer used by clusterProcessPacket in ->, at line 1881 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterProcessPacket passes to ->, at line 1881 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2148	2148

Object	->	->

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterProcessPacket(clusterLink *link) {

```
....
2148.                   sizeof(hdr->slaveof)))
```

Buffer Overflow boundcpy WrongSizeParam\Path 23:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=139
Status	New

The size of the buffer used by bitopCommand in numkeys, at line 323 of redis-3.0-annotated/bitops.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that bitopCommand passes to numkeys, at line 323 of redis-3.0-annotated/bitops.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/bitops.c	redis-3.0-annotated/bitops.c
Line	426	426
Object	numkeys	numkeys

Code Snippet
File Name redis-3.0-annotated/bitops.c
Method void bitopCommand(redisClient *c) {

```
....
426.             memcpy(lp,src,sizeof(unsigned long*)*numkeys);
```

Buffer Overflow boundcpy WrongSizeParam\Path 24:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=140
Status	New

The size of the buffer used by bitopCommand in unsigned, at line 323 of redis-3.0-annotated/bitops.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that bitopCommand passes to unsigned, at line 323 of redis-3.0-annotated/bitops.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/bitops.c	redis-3.0-annotated/bitops.c
Line	426	426

Object	unsigned	unsigned

Code Snippet
File Name redis-3.0-annotated/bitops.c
Method void bitopCommand(redisClient *c) {

```
....
426.                memcpy(lp,src,sizeof(unsigned long*)*numkeys);
```

Buffer Overflow boundcpy WrongSizeParam\Path 25:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=141
Status	New

The size of the buffer used by queueMultiCommand in c, at line 75 of redis-3.0-annotated/multi.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that queueMultiCommand passes to c, at line 75 of redis-3.0-annotated/multi.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/multi.c	redis-3.0-annotated/multi.c
Line	90	90
Object	c	c

Code Snippet
File Name redis-3.0-annotated/multi.c
Method void queueMultiCommand(redisClient *c) {

```
....
90.      memcpy(mc->argv,c->argv,sizeof(robj*)*c->argc);
```

Buffer Overflow boundcpy WrongSizeParam\Path 26:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=142
Status	New

The size of the buffer used by queueMultiCommand in robj, at line 75 of redis-3.0-annotated/multi.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that queueMultiCommand passes to robj, at line 75 of redis-3.0-annotated/multi.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/multi.c	redis-3.0-annotated/multi.c
Line	90	90

Object	robj	robj

Code Snippet
File Name redis-3.0-annotated/multi.c
Method void queueMultiCommand(redisClient *c) {

```
....
90.      memcpy(mc->argv,c->argv,sizeof(robj*)*c->argc);
```

Buffer Overflow boundcpy WrongSizeParam\Path 27:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=143
Status	New

The size of the buffer used by evictionPoolPopulate in pool, at line 3490 of redis-3.0-annotated/redis.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that evictionPoolPopulate passes to pool, at line 3490 of redis-3.0-annotated/redis.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3545	3545
Object	pool	pool

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void evictionPoolPopulate(dict *sampledict, dict *keydict, struct evictionPoolEntry *pool) {

```
....
3545.                     sizeof(pool[0])*(REDIS_EVICTION_POOL_SIZE-k-
1));
```

Buffer Overflow boundcpy WrongSizeParam\Path 28:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=144
Status	New

The size of the buffer used by evictionPoolPopulate in k, at line 3490 of redis-3.0-annotated/redis.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that evictionPoolPopulate passes to k, at line 3490 of redis-3.0-annotated/redis.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c

Line	3552	3552
Object	k	k

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void evictionPoolPopulate(dict *sampledict, dict *keydict, struct evictionPoolEntry *pool) {

```
....
3552.                    memmove(pool,pool+1,sizeof(pool[0])*k);
```

Buffer Overflow boundcpy WrongSizeParam\Path 29:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=145
Status	New

The size of the buffer used by evictionPoolPopulate in pool, at line 3490 of redis-3.0-annotated/redis.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that evictionPoolPopulate passes to pool, at line 3490 of redis-3.0-annotated/redis.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3552	3552
Object	pool	pool

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void evictionPoolPopulate(dict *sampledict, dict *keydict, struct evictionPoolEntry *pool) {

```
....
3552.                    memmove(pool,pool+1,sizeof(pool[0])*k);
```

Buffer Overflow boundcpy WrongSizeParam\Path 30:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=146
Status	New

The size of the buffer used by freeMemoryIfNeeded in pool, at line 3561 of redis-3.0-annotated/redis.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that freeMemoryIfNeeded passes to pool, at line 3561 of redis-3.0-annotated/redis.c, to overwrite the target buffer.

	Source	Destination

File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3661	3661
Object	pool	pool

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int freeMemoryIfNeeded(void) {

```
....
3661.
sizeof(pool[0])*(REDIS_EVICTION_POOL_SIZE-k-1));
```

Buffer Overflow boundcpy WrongSizeParam\Path 31:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=147
Status	New

The size of the buffer used by clusterLoadConfig in argv, at line 105 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterLoadConfig passes to argv, at line 105 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	193	193
Object	argv	argv

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterLoadConfig(char *filename) {

```
....
193.          memcpy(n->ip,argv[1],strlen(argv[1])+1);
```

Buffer Overflow boundcpy WrongSizeParam\Path 32:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=148
Status	New

The size of the buffer used by hllSparseAdd in seqlen, at line 638 of redis-3.0-annotated/hyperloglog.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that hllSparseAdd passes to seqlen, at line 638 of redis-3.0-annotated/hyperloglog.c, to overwrite the target buffer.

	Source	Destination

File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	822	822
Object	seqlen	seqlen

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllSparseAdd(robj *o, unsigned char *ele, size_t elesize) {

```
....
822.        memcpy(p,seq,seqlen);
```

Buffer Overflow boundcpy WrongSizeParam\Path 33:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=149
Status	New

The size of the buffer used by b_unpack in size, at line 291 of redis-3.0-annotated/lua_struct.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that b_unpack passes to size, at line 291 of redis-3.0-annotated/lua_struct.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/lua_struct.c	redis-3.0-annotated/lua_struct.c
Line	318	318
Object	size	size

Code Snippet
File Name redis-3.0-annotated/lua_struct.c
Method static int b_unpack (lua_State *L) {

```
....
318.          memcpy(&f, data+pos, size);
```

Buffer Overflow boundcpy WrongSizeParam\Path 34:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=150
Status	New

The size of the buffer used by b_unpack in size, at line 291 of redis-3.0-annotated/lua_struct.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that b_unpack passes to size, at line 291 of redis-3.0-annotated/lua_struct.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/lua_struct.c	redis-3.0-annotated/lua_struct.c

Line	325	325
Object	size	size

Code Snippet
File Name redis-3.0-annotated/lua_struct.c
Method static int b_unpack (lua_State *L) {

```
....
325.          memcpy(&d, data+pos, size);
```

Buffer Overflow boundcpy WrongSizeParam\Path 35:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=151
Status	New

The size of the buffer used by luaV_concat in l, at line 282 of redis-3.0-annotated/lvm.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that luaV_concat passes to l, at line 282 of redis-3.0-annotated/lvm.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/lvm.c	redis-3.0-annotated/lvm.c
Line	306	306
Object	l	l

Code Snippet
File Name redis-3.0-annotated/lvm.c
Method void luaV_concat (lua_State *L, int total, int last) {

```
....
306.          memcpy(buffer+tl, svalue(top-i), l);
```

Buffer Overflow boundcpy WrongSizeParam\Path 36:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=152
Status	New

The size of the buffer used by time_independent_strcmp in alen, at line 2870 of redis-3.0-annotated/redis.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that time_independent_strcmp passes to alen, at line 2870 of redis-3.0-annotated/redis.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	2890	2890

Object	alen	alen

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int time_independent_strcmp(char *a, char *b) {

```
....
2890.       memcpy(bufa,a,alen);
```

Buffer Overflow boundcpy WrongSizeParam\Path 37:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=153
Status	New

The size of the buffer used by time_independent_strcmp in blen, at line 2870 of redis-3.0-annotated/redis.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that time_independent_strcmp passes to blen, at line 2870 of redis-3.0-annotated/redis.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	2891	2891
Object	blen	blen

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int time_independent_strcmp(char *a, char *b) {

```
....
2891.       memcpy(bufb,b,blen);
```

Buffer Overflow boundcpy WrongSizeParam\Path 38:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=154
Status	New

The size of the buffer used by test_is_selected in l, at line 605 of redis-3.0-annotated/redis-benchmark.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that test_is_selected passes to l, at line 605 of redis-3.0-annotated/redis-benchmark.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	611	611

Object	l	l

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int test_is_selected(char *name) {

```
....
611.        memcpy(buf+1,name,l);
```

Buffer Overflow boundcpy WrongSizeParam\Path 39:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=155
Status	New

The size of the buffer used by feedReplicationBacklog in thislen, at line 127 of redis-3.0-annotated/replication.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that feedReplicationBacklog passes to thislen, at line 127 of redis-3.0-annotated/replication.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	144	144
Object	thislen	thislen

Code Snippet
File Name redis-3.0-annotated/replication.c
Method void feedReplicationBacklog(void *ptr, size_t len) {

```
....
144.
memcpy(server.repl_backlog+server.repl_backlog_idx,p,thislen);
```

Buffer Overflow boundcpy WrongSizeParam\Path 40:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=156
Status	New

The size of the buffer used by sdscatlen in len, at line 237 of redis-3.0-annotated/sds.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that sdscatlen passes to len, at line 237 of redis-3.0-annotated/sds.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	244	244

Object	len	len

Code Snippet
File Name redis-3.0-annotated/sds.c
Method sds sdscatlen(sds s, const void *t, size_t len) {

```
....
244.      memcpy(s+curlen, t, len);
```

Buffer Overflow boundcpy WrongSizeParam\Path 41:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=157
Status	New

The size of the buffer used by sdscpylen in len, at line 269 of redis-3.0-annotated/sds.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that sdscpylen passes to len, at line 269 of redis-3.0-annotated/sds.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	279	279
Object	len	len

Code Snippet
File Name redis-3.0-annotated/sds.c
Method sds sdscpylen(sds s, const char *t, size_t len) {

```
....
279.      memcpy(s, t, len);
```

Buffer Overflow boundcpy WrongSizeParam\Path 42:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=158
Status	New

The size of the buffer used by *lookupKeyByPattern in prefixlen, at line 79 of redis-3.0-annotated/sort.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that *lookupKeyByPattern passes to prefixlen, at line 79 of redis-3.0-annotated/sort.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/sort.c	redis-3.0-annotated/sort.c
Line	136	136
Object	prefixlen	prefixlen

Code Snippet
File Name redis-3.0-annotated/sort.c
Method robj *lookupKeyByPattern(redisDb *db, robj *pattern, robj *subst) {

```
....
136.        memcpy(k,spat,prefixlen);
```

Buffer Overflow boundcpy WrongSizeParam\Path 43:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=159
Status	New

The size of the buffer used by *lookupKeyByPattern in sublen, at line 79 of redis-3.0-annotated/sort.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that *lookupKeyByPattern passes to sublen, at line 79 of redis-3.0-annotated/sort.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/sort.c	redis-3.0-annotated/sort.c
Line	137	137
Object	sublen	sublen

Code Snippet
File Name redis-3.0-annotated/sort.c
Method robj *lookupKeyByPattern(redisDb *db, robj *pattern, robj *subst) {

```
....
137.        memcpy(k+prefixlen,ssub,sublen);
```

Buffer Overflow boundcpy WrongSizeParam\Path 44:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=160
Status	New

The size of the buffer used by *lookupKeyByPattern in postfixlen, at line 79 of redis-3.0-annotated/sort.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that *lookupKeyByPattern passes to postfixlen, at line 79 of redis-3.0-annotated/sort.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/sort.c	redis-3.0-annotated/sort.c
Line	138	138
Object	postfixlen	postfixlen

Code Snippet
File Name redis-3.0-annotated/sort.c
Method robj *lookupKeyByPattern(redisDb *db, robj *pattern, robj *subst) {

```
....
138.      memcpy(k+prefixlen+sublen,p+1,postfixlen);
```

Buffer Overflow boundcpy WrongSizeParam\Path 45:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=161
Status	New

The size of the buffer used by malloc_vsnprintf in cpylen, at line 298 of redis-3.0-annotated/util.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that malloc_vsnprintf passes to cpylen, at line 298 of redis-3.0-annotated/util.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	497	497
Object	cpylen	cpylen

Code Snippet
File Name redis-3.0-annotated/util.c
Method malloc_vsnprintf(char *str, size_t size, const char *format, va_list ap)

```
....
497.                           APPEND_PADDED_S(s, slen, width,
left_justify);
```

Buffer Overflow boundcpy WrongSizeParam\Path 46:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=162
Status	New

The size of the buffer used by malloc_vsnprintf in cpylen, at line 298 of redis-3.0-annotated/util.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that malloc_vsnprintf passes to cpylen, at line 298 of redis-3.0-annotated/util.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	506	506
Object	cpylen	cpylen

Code Snippet
File Name redis-3.0-annotated/util.c
Method malloc_vsnprintf(char *str, size_t size, const char *format, va_list ap)

```
....
506.                            APPEND_PADDED_S(s, slen, width,
left_justify);
```

Buffer Overflow boundcpy WrongSizeParam\Path 47:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=163
Status	New

The size of the buffer used by malloc_vsnprintf in cpylen, at line 298 of redis-3.0-annotated/util.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that malloc_vsnprintf passes to cpylen, at line 298 of redis-3.0-annotated/util.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	515	515
Object	cpylen	cpylen

Code Snippet
File Name redis-3.0-annotated/util.c
Method malloc_vsnprintf(char *str, size_t size, const char *format, va_list ap)

```
....
515.                            APPEND_PADDED_S(s, slen, width,
left_justify);
```

Buffer Overflow boundcpy WrongSizeParam\Path 48:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=164
Status	New

The size of the buffer used by malloc_vsnprintf in cpylen, at line 298 of redis-3.0-annotated/util.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that malloc_vsnprintf passes to cpylen, at line 298 of redis-3.0-annotated/util.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	524	524
Object	cpylen	cpylen

Code Snippet	
File Name	redis-3.0-annotated/util.c
Method	malloc_vsnprintf(char *str, size_t size, const char *format, va_list ap)

```
....
524.                            APPEND_PADDED_S(s, slen, width,
left_justify);
```

Buffer Overflow boundcpy WrongSizeParam\Path 49:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=165
Status	New

The size of the buffer used by malloc_vsnprintf in cpylen, at line 298 of redis-3.0-annotated/util.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that malloc_vsnprintf passes to cpylen, at line 298 of redis-3.0-annotated/util.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	536	536
Object	cpylen	cpylen

Code Snippet	
File Name	redis-3.0-annotated/util.c
Method	malloc_vsnprintf(char *str, size_t size, const char *format, va_list ap)

```
....
536.                            APPEND_PADDED_S(buf, 1, width,
left_justify);
```

Buffer Overflow boundcpy WrongSizeParam\Path 50:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=166
Status	New

The size of the buffer used by malloc_vsnprintf in cpylen, at line 298 of redis-3.0-annotated/util.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that malloc_vsnprintf passes to cpylen, at line 298 of redis-3.0-annotated/util.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	544	544

Object	cpylen	cpylen

Code Snippet
File Name redis-3.0-annotated/util.c
Method malloc_vsnprintf(char *str, size_t size, const char *format, va_list ap)

```
....
544.                            APPEND_PADDED_S(s, slen, width,
left_justify);
```

Integer Overflow

Query Path:
CPP\Cx\CPP Integer Overflow\Integer Overflow System error. Please contact your Checkmarx Administrator:0

Categories

PCI DSS v3.2: PCI DSS (3.2) - 6.5.2 - Buffer overflows
FISMA 2014: System And Information Integrity
NIST SP 800-53: SI-10 Information Input Validation (P1)

Description

Integer Overflow\Path 1:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=225
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 213 of redis-3.0-annotated/bitops.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/bitops.c	redis-3.0-annotated/bitops.c
Line	260	260
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/bitops.c
Method void setbitCommand(redisClient *c) {

```
....
260.      byte = bitoffset >> 3;
```

Integer Overflow\Path 2:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=226
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 213 of redis-3.0-annotated/bitops.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/bitops.c	redis-3.0-annotated/bitops.c
Line	267	267
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/bitops.c
Method void setbitCommand(redisClient *c) {

```
....
267.      bit = 7 - (bitoffset & 0x7);
```

Integer Overflow\Path 3:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=227
Status New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 638 of redis-3.0-annotated/hyperloglog.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	771	771
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllSparseAdd(robj *o, unsigned char *ele, size_t elesize) {

```
....
771.              len = index-first;
```

Integer Overflow\Path 4:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=228
Status New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 638 of redis-3.0-annotated/hyperloglog.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	783	783
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllSparseAdd(robj *o, unsigned char *ele, size_t elesize) {

```
....
783.                len = last-index;
```

Integer Overflow\Path 5:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=229
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 638 of redis-3.0-annotated/hyperloglog.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	797	797
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllSparseAdd(robj *o, unsigned char *ele, size_t elesize) {

```
....
797.                len = index-first;
```

Integer Overflow\Path 6:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=230
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 638 of redis-3.0-annotated/hyperloglog.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination

File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	804	804
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllSparseAdd(robj *o, unsigned char *ele, size_t elesize) {

```
....
804.                len = last-index;
```

Integer Overflow\Path 7:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=231
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 1044 of redis-3.0-annotated/hyperloglog.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1064	1064
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllMerge(uint8_t *max, robj *hll) {

```
....
1064.                    i += runlen;
```

Integer Overflow\Path 8:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=232
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 1044 of redis-3.0-annotated/hyperloglog.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c

Line	1068	1068
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllMerge(uint8_t *max, robj *hll) {

```
....
1068.                   i += runlen;
```

Integer Overflow\Path 9:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=233
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 1351 of redis-3.0-annotated/hyperloglog.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1375	1375
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method void pfselftestCommand(redisClient *c) {

```
....
1375.               HLL_DENSE_GET_REGISTER(val,hdr->registers,i);
```

Integer Overflow\Path 10:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=234
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 401 of redis-3.0-annotated/rdb.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	447	447
Object	AssignExpr	AssignExpr

Code Snippet	
File Name	redis-3.0-annotated/rdb.c
Method	int rdbSaveRawString(rio *rdb, unsigned char *s, size_t len) {

```
....
447.            nwritten += len;
```

Integer Overflow\Path 11:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=235
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 388 of redis-3.0-annotated/sds.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	394	394
Object	AssignExpr	AssignExpr

Code Snippet	
File Name	redis-3.0-annotated/sds.c
Method	void sdsrange(sds s, int start, int end) {

```
....
394.            start = len+start;
```

Integer Overflow\Path 12:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=236
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 388 of redis-3.0-annotated/sds.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	398	398
Object	AssignExpr	AssignExpr

Code Snippet	
File Name	redis-3.0-annotated/sds.c
Method	void sdsrange(sds s, int start, int end) {

```
....
398.          end = len+end;
```

Integer Overflow\Path 13:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=237
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 388 of redis-3.0-annotated/sds.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	406	406
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/sds.c
Method void sdsrange(sds s, int start, int end) {

```
....
406.              end = len-1;
```

Integer Overflow\Path 14:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=238
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 255 of redis-3.0-annotated/sort.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/sort.c	redis-3.0-annotated/sort.c
Line	464	464
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/sort.c
Method void sortCommand(redisClient *c) {

```
....
464.          vectorlen = end-start+1;
```

Integer Overflow\Path 15:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=239
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 255 of redis-3.0-annotated/sort.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/sort.c	redis-3.0-annotated/sort.c
Line	632	632
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/sort.c
Method void sortCommand(redisClient *c) {

```
....
632.      outputlen = getop ? getop*(end-start+1) : end-start+1;
```

Integer Overflow\Path 16:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=240
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 255 of redis-3.0-annotated/sort.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/sort.c	redis-3.0-annotated/sort.c
Line	641	641
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/sort.c
Method void sortCommand(redisClient *c) {

```
....
641.          for (j = start; j <= end; j++) {
```

Integer Overflow\Path 17:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=500

	83&pathid=241
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 255 of redis-3.0-annotated/sort.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/sort.c	redis-3.0-annotated/sort.c
Line	681	681
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/sort.c
Method void sortCommand(redisClient *c) {

```
....
681.            for (j = start; j <= end; j++) {
```

Integer Overflow\Path 18:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=242
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 2972 of redis-3.0-annotated/t_zset.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	3012	3012
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/t_zset.c
Method void zrangeGenericCommand(redisClient *c, int reverse) {

```
....
3012.       rangelen = (end-start)+1;
```

Integer Overflow\Path 19:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=243
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 3301 of redis-3.0-annotated/t_zset.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	3376	3376
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/t_zset.c
Method void zcountCommand(redisClient *c) {

```
....
3376.              count = (zsl->length - (rank - 1));
```

Integer Overflow\Path 20:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=244
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 3301 of redis-3.0-annotated/t_zset.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	3390	3390
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/t_zset.c
Method void zcountCommand(redisClient *c) {

```
....
3390.                  count -= (zsl->length - rank);
```

Integer Overflow\Path 21:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=245
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 3401 of redis-3.0-annotated/t_zset.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	3461	3461

Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/t_zset.c
Method void zlexcountCommand(redisClient *c) {

```
....
3461.              count = (zsl->length - (rank - 1));
```

Integer Overflow\Path 22:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=246
Status New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 3401 of redis-3.0-annotated/t_zset.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	3469	3469
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/t_zset.c
Method void zlexcountCommand(redisClient *c) {

```
....
3469.                  count -= (zsl->length - rank);
```

Integer Overflow\Path 23:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=247
Status New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 298 of redis-3.0-annotated/util.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	571	571
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/util.c

Method	malloc_vsnprintf(char *str, size_t size, const char *format, va_list ap)

```
....
571.        ret = i;
```

Integer Overflow\Path 24:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=248
Status	New

A variable of a larger data type, last, is being assigned to a smaller data type, in 638 of redis-3.0-annotated/hyperloglog.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	765	765
Object	last	last

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllSparseAdd(robj *o, unsigned char *ele, size_t elesize) {

```
....
765.      int last = first+span-1; /* Last register covered by the
sequence. */
```

Integer Overflow\Path 25:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=249
Status	New

A variable of a larger data type, oldlen, is being assigned to a smaller data type, in 638 of redis-3.0-annotated/hyperloglog.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	815	815
Object	oldlen	oldlen

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllSparseAdd(robj *o, unsigned char *ele, size_t elesize) {

```
....
815.        int oldlen = is_xzero ? 2 : 1;
```

Use of Zero Initialized Pointer

Query Path:
CPP\Cx\CPP Medium Threat\Use of Zero Initialized Pointer System error. Please contact your Checkmarx Administrator:1

Categories

NIST SP 800-53: SC-5 Denial of Service Protection (P1)

Description

Use of Zero Initialized Pointer\Path 1:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=471
Status	New

The variable declared in sizes at redis-3.0-annotated/redis-cli.c in line 1473 is not initialized when it is used by sizes at redis-3.0-annotated/redis-cli.c in line 1473.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1475	1512
Object	sizes	sizes

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void findBigKeys(void) {

```
....
1475.      unsigned long long sampled = 0, total_keys, totlen=0,
*sizes=NULL, it=0;
....
1512.              sizes = zrealloc(sizes, sizeof(unsigned long
long)*keys->elements);
```

Use of Zero Initialized Pointer\Path 2:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=472
Status	New

The variable declared in context at redis-3.0-annotated/redis-cli.c in line 329 is not initialized when it is used by sizes at redis-3.0-annotated/redis-cli.c in line 1473.

	Source	Destination

File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	347	1512
Object	context	sizes

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static int cliConnect(int force) {

```
....
347.                context = NULL;
```

File Name redis-3.0-annotated/redis-cli.c
Method static void findBigKeys(void) {

```
....
1512.                sizes = zrealloc(sizes, sizeof(unsigned long
long)*keys->elements);
```

Use of Zero Initialized Pointer\Path 3:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=473
Status	New

The variable declared in argv at redis-3.0-annotated/scripting.c in line 235 is not initialized when it is used by argv at redis-3.0-annotated/scripting.c in line 235.

	Source	Destination
File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	242	295
Object	argv	argv

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method int luaRedisGenericCommand(lua_State *lua, int raise_error) {

```
....
242.      static robj **argv = NULL;
....
295.                decrRefCount(argv[j]);
```

Use of Zero Initialized Pointer\Path 4:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=500

	83&pathid=474
Status	New

The variable declared in argv at redis-3.0-annotated/scripting.c in line 235 is not initialized when it is used by argv at redis-3.0-annotated/scripting.c in line 235.

	Source	Destination
File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	242	310
Object	argv	argv

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method int luaRedisGenericCommand(lua_State *lua, int raise_error) {

```
....
242.      static robj **argv = NULL;
....
310.      cmd = lookupCommand(argv[0]->ptr);
```

Use of Zero Initialized Pointer\Path 5:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=475
Status	New

The variable declared in argv at redis-3.0-annotated/scripting.c in line 235 is not initialized when it is used by argv at redis-3.0-annotated/scripting.c in line 235.

	Source	Destination
File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	242	310
Object	argv	argv

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method int luaRedisGenericCommand(lua_State *lua, int raise_error) {

```
....
242.      static robj **argv = NULL;
....
310.      cmd = lookupCommand(argv[0]->ptr);
```

Use of Zero Initialized Pointer\Path 6:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=500

	83&pathid=476
Status	New

The variable declared in argv at redis-3.0-annotated/scripting.c in line 235 is not initialized when it is used by cached_objects at redis-3.0-annotated/scripting.c in line 235.

	Source	Destination
File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	242	458
Object	argv	cached_objects

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method int luaRedisGenericCommand(lua_State *lua, int raise_error) {

```
....
242.      static robj **argv = NULL;
....
458.                cached_objects[j] = o;
```

Use of Zero Initialized Pointer\Path 7:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=477
Status	New

The variable declared in vector at redis-3.0-annotated/sds.c in line 628 is not initialized when it is used by vector at redis-3.0-annotated/sds.c in line 628.

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	631	718
Object	vector	vector

Code Snippet
File Name redis-3.0-annotated/sds.c
Method sds *sdssplitargs(const char *line, int *argc) {

```
....
631.      char **vector = NULL;
....
718.                vector = zrealloc(vector,((*argc)+1)*sizeof(char*));
```

Use of Zero Initialized Pointer\Path 8:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=500

	83&pathid=478
Status	New

The variable declared in vector at redis-3.0-annotated/sds.c in line 628 is not initialized when it is used by vector at redis-3.0-annotated/sds.c in line 628.

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	631	731
Object	vector	vector

Code Snippet
File Name redis-3.0-annotated/sds.c
Method sds *sdssplitargs(const char *line, int *argc) {

```
....
631.      char **vector = NULL;
....
731.          sdsfree(vector[*argc]);
```

Use of Zero Initialized Pointer\Path 9:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=479
Status	New

The variable declared in value at redis-3.0-annotated/t_list.c in line 296 is not initialized when it is used by value at redis-3.0-annotated/t_list.c in line 296.

	Source	Destination
File	redis-3.0-annotated/t_list.c	redis-3.0-annotated/t_list.c
Line	300	319
Object	value	value

Code Snippet
File Name redis-3.0-annotated/t_list.c
Method robj *listTypeGet(listTypeEntry *entry) {

```
....
300.      robj *value = NULL;
....
319.          value = listNodeValue(entry->ln);
```

Use of Zero Initialized Pointer\Path 10:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=500

	83&pathid=480
Status	New

The variable declared in value at redis-3.0-annotated/t_list.c in line 118 is not initialized when it is used by value at redis-3.0-annotated/t_list.c in line 296.

	Source	Destination
File	redis-3.0-annotated/t_list.c	redis-3.0-annotated/t_list.c
Line	120	319
Object	value	value

Code Snippet

File Name redis-3.0-annotated/t_list.c

Method robj *listTypePop(robj *subject, int where) {

```
....
120.      robj *value = NULL;
```

File Name redis-3.0-annotated/t_list.c

Method robj *listTypeGet(listTypeEntry *entry) {

```
....
319.          value = listNodeValue(entry->ln);
```

Use of Zero Initialized Pointer\Path 11:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=481
Status	New

The variable declared in value at redis-3.0-annotated/t_list.c in line 118 is not initialized when it is used by value at redis-3.0-annotated/t_list.c in line 118.

	Source	Destination
File	redis-3.0-annotated/t_list.c	redis-3.0-annotated/t_list.c
Line	120	160
Object	value	value

Code Snippet

File Name redis-3.0-annotated/t_list.c

Method robj *listTypePop(robj *subject, int where) {

```
....
120.      robj *value = NULL;
....
160.              value = listNodeValue(ln);
```

Use of Zero Initialized Pointer\Path 12:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=482
Status	New

The variable declared in link at redis-3.0-annotated/cluster.c in line 605 is not initialized when it is used by link at redis-3.0-annotated/cluster.c in line 605.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	619	605
Object	link	link

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void freeClusterLink(clusterLink *link) {

```
....
619.          link->node->link = NULL;
....
605.  void freeClusterLink(clusterLink *link) {
```

Use of Zero Initialized Pointer\Path 13:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=483
Status	New

The variable declared in link at redis-3.0-annotated/cluster.c in line 605 is not initialized when it is used by link at redis-3.0-annotated/cluster.c in line 605.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	619	618
Object	link	link

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void freeClusterLink(clusterLink *link) {

```
....
619.           link->node->link = NULL;
....
618.       if (link->node)
```

Use of Zero Initialized Pointer\Path 14:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=484
Status	New

The variable declared in link at redis-3.0-annotated/cluster.c in line 605 is not initialized when it is used by link at redis-3.0-annotated/cluster.c in line 605.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	619	614
Object	link	link

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void freeClusterLink(clusterLink *link) {

```
....
619.           link->node->link = NULL;
....
614.       sdsfree(link->sndbuf);
```

Use of Zero Initialized Pointer\Path 15:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=485
Status	New

The variable declared in link at redis-3.0-annotated/cluster.c in line 605 is not initialized when it is used by link at redis-3.0-annotated/cluster.c in line 605.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	619	615
Object	link	link

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void freeClusterLink(clusterLink *link) {

```
....
619.          link->node->link = NULL;
....
615.      sdsfree(link->rcvbuf);
```

Use of Zero Initialized Pointer\Path 16:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=486
Status	New

The variable declared in slaves at redis-3.0-annotated/cluster.c in line 950 is not initialized when it is used by sender_master at redis-3.0-annotated/cluster.c in line 1881.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	953	2221
Object	slaves	sender_master

Code Snippet

File Name redis-3.0-annotated/cluster.c

Method void clusterNodeResetSlaves(clusterNode *n) {

```
....
953.      n->slaves = NULL;
```

File Name redis-3.0-annotated/cluster.c

Method int clusterProcessPacket(clusterLink *link) {

```
....
2221.             sender_master = nodeIsMaster(sender) ? sender :
sender->slaveof;
```

Use of Zero Initialized Pointer\Path 17:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=487
Status	New

The variable declared in link at redis-3.0-annotated/cluster.c in line 605 is not initialized when it is used by sender_master at redis-3.0-annotated/cluster.c in line 1881.

	Source	Destination

File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	619	2221
Object	link	sender_master

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void freeClusterLink(clusterLink *link) {

```
....
619.            link->node->link = NULL;
```

File Name redis-3.0-annotated/cluster.c
Method int clusterProcessPacket(clusterLink *link) {

```
....
2221.               sender_master = nodeIsMaster(sender) ? sender :
sender->slaveof;
```

Use of Zero Initialized Pointer\Path 18:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=488
Status	New

The variable declared in ops at redis-3.0-annotated/redis.c in line 2289 is not initialized when it is used by ops at redis-3.0-annotated/redis.c in line 2310.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	2290	2316
Object	ops	ops

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void redisOpArrayInit(redisOpArray *oa) {

```
....
2290.       oa->ops = NULL;
```

File Name redis-3.0-annotated/redis.c
Method void redisOpArrayFree(redisOpArray *oa) {

```
....
2316.          op = oa->ops+oa->numops;
```

Use of Zero Initialized Pointer\Path 19:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=489
Status	New

The variable declared in current at redis-3.0-annotated/sds.c in line 628 is not initialized when it is used by vector at redis-3.0-annotated/sds.c in line 628.

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	721	719
Object	current	vector

Code Snippet
File Name redis-3.0-annotated/sds.c
Method sds *sdssplitargs(const char *line, int *argc) {

```
....
721.              current = NULL;
....
719.              vector[*argc] = current;
```

Use of Zero Initialized Pointer\Path 20:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=490
Status	New

The variable declared in fptr at redis-3.0-annotated/t_hash.c in line 407 is not initialized when it is used by fptr at redis-3.0-annotated/t_hash.c in line 458.

	Source	Destination
File	redis-3.0-annotated/t_hash.c	redis-3.0-annotated/t_hash.c
Line	419	492
Object	fptr	fptr

Code Snippet
File Name redis-3.0-annotated/t_hash.c
Method hashTypeIterator *hashTypeInitIterator(robj *subject) {

```
....
419.          hi->fptr = NULL;
```

File Name redis-3.0-annotated/t_hash.c

Method int hashTypeNext(hashTypeIterator *hi) {

```
....
492.          hi->fptr = fptr;
```

Use of Zero Initialized Pointer\Path 21:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=491
Status	New

The variable declared in vptr at redis-3.0-annotated/t_hash.c in line 407 is not initialized when it is used by fptr at redis-3.0-annotated/t_hash.c in line 458.

	Source	Destination
File	redis-3.0-annotated/t_hash.c	redis-3.0-annotated/t_hash.c
Line	420	492
Object	vptr	fptr

Code Snippet

File Name redis-3.0-annotated/t_hash.c

Method hashTypeIterator *hashTypeInitIterator(robj *subject) {

```
....
420.          hi->vptr = NULL;
```

File Name redis-3.0-annotated/t_hash.c

Method int hashTypeNext(hashTypeIterator *hi) {

```
....
492.          hi->fptr = fptr;
```

Use of Zero Initialized Pointer\Path 22:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=492
Status	New

The variable declared in backward at redis-3.0-annotated/t_zset.c in line 103 is not initialized when it is used by tail at redis-3.0-annotated/t_zset.c in line 198.

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	121	301
Object	backward	tail

Code Snippet
File Name redis-3.0-annotated/t_zset.c
Method zskiplist *zslCreate(void) {

```
....
121.      zsl->header->backward = NULL;
```

File Name redis-3.0-annotated/t_zset.c

Method zskiplistNode *zslInsert(zskiplist *zsl, double score, robj *obj) {

```
....
301.          zsl->tail = x;
```

Use of Zero Initialized Pointer\Path 23:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=493
Status	New

The variable declared in _sptr at redis-3.0-annotated/t_zset.c in line 1076 is not initialized when it is used by tail at redis-3.0-annotated/t_zset.c in line 198.

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	1089	301
Object	_sptr	tail

Code Snippet
File Name redis-3.0-annotated/t_zset.c
Method void zzlNext(unsigned char *zl, unsigned char **eptr, unsigned char **sptr) {

```
....
1089.          _sptr = NULL;
```

File Name redis-3.0-annotated/t_zset.c

Method	zskiplistNode *zslInsert(zskiplist *zsl, double score, robj *obj) {

```
....
301.          zsl->tail = x;
```

Use of Zero Initialized Pointer\Path 24:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=494
Status	New

The variable declared in subject at redis-3.0-annotated/t_zset.c in line 2672 is not initialized when it is used by tail at redis-3.0-annotated/t_zset.c in line 198.

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	2725	301
Object	subject	tail

Code Snippet

File Name redis-3.0-annotated/t_zset.c

Method void zunionInterGenericCommand(redisClient *c, robj *dstkey, int op) {

```
....
2725.              src[i].subject = NULL;
```

File Name redis-3.0-annotated/t_zset.c

Method zskiplistNode *zslInsert(zskiplist *zsl, double score, robj *obj) {

```
....
301.          zsl->tail = x;
```

Use of Zero Initialized Pointer\Path 25:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=495
Status	New

The variable declared in tail at redis-3.0-annotated/t_zset.c in line 103 is not initialized when it is used by tail at redis-3.0-annotated/t_zset.c in line 198.

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c

Line	124	301
Object	tail	tail

Code Snippet
File Name redis-3.0-annotated/t_zset.c
Method zskiplist *zslCreate(void) {

```
....
124.      zsl->tail = NULL;
```

File Name redis-3.0-annotated/t_zset.c

Method zskiplistNode *zslInsert(zskiplist *zsl, double score, robj *obj) {

```
....
301.          zsl->tail = x;
```

MemoryFree on StackVariable

Query Path:
CPP\Cx\CPP Medium Threat\MemoryFree on StackVariable System error. Please contact your Checkmarx Administrator:0

Description

MemoryFree on StackVariable\Path 1:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=173
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	679	679
Object	cmd	cmd

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int main(int argc, const char **argv) {

```
....
679.              free(cmd);
```

MemoryFree on StackVariable\Path 2:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-

	BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=174
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	697	697
Object	cmd	cmd

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int main(int argc, const char **argv) {

```
....
697.                free(cmd);
```

MemoryFree on StackVariable\Path 3:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=175
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	703	703
Object	cmd	cmd

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int main(int argc, const char **argv) {

```
....
703.                free(cmd);
```

MemoryFree on StackVariable\Path 4:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=176
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	709	709
Object	cmd	cmd

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int main(int argc, const char **argv) {

```
....
709.                free(cmd);
```

MemoryFree on StackVariable\Path 5:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=177
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	715	715
Object	cmd	cmd

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int main(int argc, const char **argv) {

```
....
715.                free(cmd);
```

MemoryFree on StackVariable\Path 6:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=178
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	721	721
Object	cmd	cmd

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int main(int argc, const char **argv) {

```
....
721.                free(cmd);
```

MemoryFree on StackVariable\Path 7:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=179
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	727	727
Object	cmd	cmd

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int main(int argc, const char **argv) {

```
....
727.                free(cmd);
```

MemoryFree on StackVariable\Path 8:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=180
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c

Line	734	734
Object	cmd	cmd

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int main(int argc, const char **argv) {

```
....
734.                free(cmd);
```

MemoryFree on StackVariable\Path 9:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=181
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	740	740
Object	cmd	cmd

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int main(int argc, const char **argv) {

```
....
740.                free(cmd);
```

MemoryFree on StackVariable\Path 10:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=182
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	751	751
Object	cmd	cmd

Code Snippet	
File Name	redis-3.0-annotated/redis-benchmark.c
Method	int main(int argc, const char **argv) {

```
....
751.                free(cmd);
```

MemoryFree on StackVariable\Path 11:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=183
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	757	757
Object	cmd	cmd

Code Snippet	
File Name	redis-3.0-annotated/redis-benchmark.c
Method	int main(int argc, const char **argv) {

```
....
757.                free(cmd);
```

MemoryFree on StackVariable\Path 12:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=184
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	763	763
Object	cmd	cmd

Code Snippet	
File Name	redis-3.0-annotated/redis-benchmark.c

Method	int main(int argc, const char **argv) {

```
....
763.                free(cmd);
```

MemoryFree on StackVariable\Path 13:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=185
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	769	769
Object	cmd	cmd

Code Snippet	
File Name	redis-3.0-annotated/redis-benchmark.c
Method	int main(int argc, const char **argv) {

```
....
769.                free(cmd);
```

MemoryFree on StackVariable\Path 14:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=186
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	775	775
Object	cmd	cmd

Code Snippet	
File Name	redis-3.0-annotated/redis-benchmark.c
Method	int main(int argc, const char **argv) {

```
....
775.                free(cmd);
```

MemoryFree on StackVariable\Path 15:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=187
Status	New

Calling free() (line 617) on a variable that was not dynamically allocated (line 617) in file redis-3.0-annotated/redis-benchmark.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	787	787
Object	cmd	cmd

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int main(int argc, const char **argv) {

```
....
787.                free(cmd);
```

MemoryFree on StackVariable\Path 16:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=188
Status	New

Calling free() (line 861) on a variable that was not dynamically allocated (line 861) in file redis-3.0-annotated/redis-cli.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	891	891
Object	line	line

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void repl() {

```
....
891.                    free(line);
```

MemoryFree on StackVariable\Path 17:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=189
Status	New

Calling free() (line 861) on a variable that was not dynamically allocated (line 861) in file redis-3.0-annotated/redis-cli.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	947	947
Object	line	line

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void repl() {

```
....
947.            free(line);
```

MemoryFree on StackVariable\Path 18:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=190
Status	New

Calling free() (line 1628) on a variable that was not dynamically allocated (line 1628) in file redis-3.0-annotated/redis-cli.c may result with a crash.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1634	1634
Object	value	value

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static long getLongInfoField(char *info, char *field) {

```
....
1634.       free(value);
```

Memory Leak

Query Path:
CPP\Cx\CPP Medium Threat\Memory Leak System error. Please contact your Checkmarx Administrator:1

Categories

NIST SP 800-53: SC-5 Denial of Service Protection (P1)

Description

Memory Leak\Path 1:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=456
Status	New

	Source	Destination
File	redis-3.0-annotated/t_hash.c	redis-3.0-annotated/t_hash.c
Line	808	808
Object	neW	neW

Code Snippet
File Name redis-3.0-annotated/t_hash.c
Method void hincrbyCommand(redisClient *c) {

```
....
808.       robj *o, *current, *new;
```

Memory Leak\Path 2:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=457
Status	New

	Source	Destination
File	redis-3.0-annotated/t_hash.c	redis-3.0-annotated/t_hash.c
Line	863	863
Object	neW	neW

Code Snippet
File Name redis-3.0-annotated/t_hash.c
Method void hincrbyfloatCommand(redisClient *c) {

```
....
863.        robj *o, *current, *new, *aux;
```

Memory Leak\Path 3:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=458
Status	New

	Source	Destination
File	redis-3.0-annotated/t_string.c	redis-3.0-annotated/t_string.c
Line	461	461
Object	neW	neW

Code Snippet
File Name redis-3.0-annotated/t_string.c
Method void incrDecrCommand(redisClient *c, long long incr) {

```
....
461.        robj *o, *new;
```

Memory Leak\Path 4:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=459
Status	New

	Source	Destination
File	redis-3.0-annotated/t_string.c	redis-3.0-annotated/t_string.c
Line	529	529
Object	neW	neW

Code Snippet
File Name redis-3.0-annotated/t_string.c
Method void incrbyfloatCommand(redisClient *c) {

```
....
529.        robj *o, *new, *aux;
```

Memory Leak\Path 5:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-

	BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=460
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	485	485
Object	hostip	hostip

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int parseOptions(int argc, const char **argv) {

```
....
485.                config.hostip = strdup(argv[++i]);
```

Memory Leak\Path 6:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=461
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	491	491
Object	hostsocket	hostsocket

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int parseOptions(int argc, const char **argv) {

```
....
491.                config.hostsocket = strdup(argv[++i]);
```

Memory Leak\Path 7:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=462
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	179	179

Object	helpEntries	helpEntries

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void cliInitHelp() {

```
....
179.      helpEntries = malloc(sizeof(helpEntry)*len);
```

Memory Leak\Path 8:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=463
Status New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	183	183
Object	argv	argv

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void cliInitHelp() {

```
....
183.          tmp.argv = malloc(sizeof(sds));
```

Memory Leak\Path 9:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=464
Status New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1620	1620
Object	result	result

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static char *getInfoField(char *info, char *field) {

```
....
1620.       result = malloc(sizeof(char)*(n1-p)+1);
```

Divide By Zero

Query Path:
CPP\Cx\CPP Medium Threat\Divide By Zero System error. Please contact your Checkmarx Administrator:1

Description

Divide By Zero\Path 1:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=103
Status	New

The application performs an illegal operation in hllCount, in redis-3.0-annotated/hyperloglog.c. In line 967, the program attempts to divide by ez, which might be evaluate to 0 (zero) at time of division. This value could be a hard-coded zero value, or received from external, untrusted input ez in hllCount of redis-3.0-annotated/hyperloglog.c, at line 967.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1006	1006
Object	ez	ez

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method uint64_t hllCount(struct hllhdr *hdr, int *invalid) {

```
....
1006.           E = m*log(m/ez); /* LINEARCOUNTING() */
```

Divide By Zero\Path 2:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=104
Status	New

The application performs an illegal operation in activeExpireCycle, in redis-3.0-annotated/redis.c. In line 857, the program attempts to divide by ttl_samples, which might be evaluate to 0 (zero) at time of division. This value could be a hard-coded zero value, or received from external, untrusted input ttl_samples in activeExpireCycle of redis-3.0-annotated/redis.c, at line 857.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	995	995

Object	ttl_samples	ttl_samples

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void activeExpireCycle(int type) {

```
....
995.                    long long avg_ttl = ttl_sum/ttl_samples;
```

Divide By Zero\Path 3:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=105
Status	New

The application performs an illegal operation in findBigKeys, in redis-3.0-annotated/redis-cli.c. In line 1473, the program attempts to divide by sampled, which might be evaluate to 0 (zero) at time of division. This value could be a hard-coded zero value, or received from external, untrusted input sampled in findBigKeys of redis-3.0-annotated/redis-cli.c, at line 1473.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1575	1575
Object	sampled	sampled

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void findBigKeys(void) {

```
....
1575.          totlen, totlen ? (double)totlen/sampled : 0);
```

Divide By Zero\Path 4:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=106
Status	New

The application performs an illegal operation in findBigKeys, in redis-3.0-annotated/redis-cli.c. In line 1473, the program attempts to divide by sampled, which might be evaluate to 0 (zero) at time of division. This value could be a hard-coded zero value, or received from external, untrusted input sampled in findBigKeys of redis-3.0-annotated/redis-cli.c, at line 1473.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c

Line	1590	1590
Object	sampled	sampled

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void findBigKeys(void) {

```
....
1590.             sampled ? 100 * (double)counts[i]/sampled : 0,
```

Divide By Zero\Path 5:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=107
Status New

The application performs an illegal operation in hllCount, in redis-3.0-annotated/hyperloglog.c. In line 967, the program attempts to divide by E, which might be evaluate to 0 (zero) at time of division. This value could be a hard-coded zero value, or received from external, untrusted input E in hllCount of redis-3.0-annotated/hyperloglog.c, at line 967.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	998	998
Object	E	E

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method uint64_t hllCount(struct hllhdr *hdr, int *invalid) {

```
....
998.      E = (1/E)*alpha*m*m;
```

Divide By Zero\Path 6:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=108
Status New

The application performs an illegal operation in initServerConfig, in redis-3.0-annotated/redis.c. In line 1716, the program attempts to divide by R_Zero, which might be evaluate to 0 (zero) at time of division. This value could be a hard-coded zero value, or received from external, untrusted input R_Zero in initServerConfig of redis-3.0-annotated/redis.c, at line 1716.

	Source	Destination

File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	1851	1851
Object	R_Zero	R_Zero

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void initServerConfig() {

```
....
1851.       R_PosInf = 1.0/R_Zero;
```

Divide By Zero\Path 7:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=109
Status	New

The application performs an illegal operation in initServerConfig, in redis-3.0-annotated/redis.c. In line 1716, the program attempts to divide by R_Zero, which might be evaluate to 0 (zero) at time of division. This value could be a hard-coded zero value, or received from external, untrusted input R_Zero in initServerConfig of redis-3.0-annotated/redis.c, at line 1716.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	1852	1852
Object	R_Zero	R_Zero

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void initServerConfig() {

```
....
1852.       R_NegInf = -1.0/R_Zero;
```

Divide By Zero\Path 8:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=110
Status	New

The application performs an illegal operation in initServerConfig, in redis-3.0-annotated/redis.c. In line 1716, the program attempts to divide by R_Zero, which might be evaluate to 0 (zero) at time of division. This value could be a hard-coded zero value, or received from external, untrusted input R_Zero in initServerConfig of redis-3.0-annotated/redis.c, at line 1716.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	1853	1853
Object	R_Zero	R_Zero

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void initServerConfig() {

```
....
1853.       R_Nan = R_Zero/R_Zero;
```

Char Overflow

Query Path:
CPP\Cx\CPP Integer Overflow\Char Overflow System error. Please contact your Checkmarx Administrator:1

Categories

PCI DSS v3.2: PCI DSS (3.2) - 6.5.2 - Buffer overflows
NIST SP 800-53: SI-10 Information Input Validation (P1)

Description
Char Overflow\Path 1:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=217
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 1790 of redis-3.0-annotated/redis-cli.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1795	1795
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method unsigned long compute_something_fast(void) {

```
....
1795.       for (k = 0; k < 256; k++) s[k] = k;
```

Char Overflow\Path 2:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-

	BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=218
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 375 of redis-3.0-annotated/ziplist.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	384	384
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method static unsigned int zipEncodeLength(unsigned char *p, unsigned char encoding, unsigned int rawlen) {

```
....
384.             buf[0] = ZIP_STR_06B | rawlen;
```

Char Overflow\Path 3:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=219
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 375 of redis-3.0-annotated/ziplist.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	388	388
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method static unsigned int zipEncodeLength(unsigned char *p, unsigned char encoding, unsigned int rawlen) {

```
....
388.             buf[0] = ZIP_STR_14B | ((rawlen >> 8) & 0x3f);
```

Char Overflow\Path 4:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=220
Status	New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 375 of redis-3.0-annotated/ziplist.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	389	389
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method static unsigned int zipEncodeLength(unsigned char *p, unsigned char encoding, unsigned int rawlen) {

```
....
389.             buf[1] = rawlen & 0xff;
```

Char Overflow\Path 5:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=221
Status New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 375 of redis-3.0-annotated/ziplist.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	394	394
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method static unsigned int zipEncodeLength(unsigned char *p, unsigned char encoding, unsigned int rawlen) {

```
....
394.             buf[1] = (rawlen >> 24) & 0xff;
```

Char Overflow\Path 6:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=222
Status New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 375 of redis-3.0-annotated/ziplist.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	395	395
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method static unsigned int zipEncodeLength(unsigned char *p, unsigned char encoding, unsigned int rawlen) {

```
....
395.             buf[2] = (rawlen >> 16) & 0xff;
```

Char Overflow\Path 7:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=223
Status New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 375 of redis-3.0-annotated/ziplist.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	396	396
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method static unsigned int zipEncodeLength(unsigned char *p, unsigned char encoding, unsigned int rawlen) {

```
....
396.             buf[3] = (rawlen >> 8) & 0xff;
```

Char Overflow\Path 8:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=224
Status New

A variable of a larger data type, AssignExpr, is being assigned to a smaller data type, in 375 of redis-3.0-annotated/ziplist.c. This will cause a loss of data, often the significant bits of a numerical value or the sign bit.

	Source	Destination

File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	397	397
Object	AssignExpr	AssignExpr

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method static unsigned int zipEncodeLength(unsigned char *p, unsigned char encoding, unsigned int rawlen) {

```
....
397.                buf[4] = rawlen & 0xff;
```

Buffer Overflow AddressOfLocalVarReturned

Query Path:
CPP\Cx\CPP Buffer Overflow\Buffer Overflow AddressOfLocalVarReturned System error. Please contact your Checkmarx Administrator:1

Categories

PCI DSS v3.2: PCI DSS (3.2) - 6.5.2 - Buffer overflows
NIST SP 800-53: SC-5 Denial of Service Protection (P1)
OWASP Top 10 2017: A1-Injection

Description
Buffer Overflow AddressOfLocalVarReturned\Path 1:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=111
Status	New

The pointer o2 at redis-3.0-annotated/redis.c in line 532 is being used after it has been freed.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	540	540
Object	o2	o2

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int dictEncObjKeyCompare(void *privdata, const void *key1,

```
....
540.                return o1->ptr == o2->ptr;
```

Buffer Overflow AddressOfLocalVarReturned\Path 2:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=500

	83&pathid=112
Status	New

The pointer buf at redis-3.0-annotated/rdb.c in line 152 is being used after it has been freed.

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	168	168
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/rdb.c
Method uint32_t rdbLoadLen(rio *rdb, int *isencoded) {

```
....
168.            return buf[0]&0x3F;
```

Buffer Overflow AddressOfLocalVarReturned\Path 3:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=113
Status	New

The pointer buf at redis-3.0-annotated/rdb.c in line 152 is being used after it has been freed.

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	173	173
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/rdb.c
Method uint32_t rdbLoadLen(rio *rdb, int *isencoded) {

```
....
173.            return buf[0]&0x3F;
```

Buffer Overflow AddressOfLocalVarReturned\Path 4:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=114
Status	New

The pointer buf at redis-3.0-annotated/rdb.c in line 152 is being used after it has been freed.

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	179	179
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/rdb.c
Method uint32_t rdbLoadLen(rio *rdb, int *isencoded) {

```
....
179.            return ((buf[0]&0x3F)<<8)|buf[1];
```

Buffer Overflow AddressOfLocalVarReturned\Path 5:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=115
Status	New

The pointer buf at redis-3.0-annotated/rdb.c in line 152 is being used after it has been freed.

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	179	179
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/rdb.c
Method uint32_t rdbLoadLen(rio *rdb, int *isencoded) {

```
....
179.            return ((buf[0]&0x3F)<<8)|buf[1];
```

Buffer Overflow AddressOfLocalVarReturned\Path 6:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=116
Status	New

The pointer o2 at redis-3.0-annotated/t_set.c in line 921 is being used after it has been freed.

	Source	Destination
File	redis-3.0-annotated/t_set.c	redis-3.0-annotated/t_set.c
Line	924	924

Object	o2	o2

Code Snippet
File Name redis-3.0-annotated/t_set.c
Method int qsortCompareSetsByRevCardinality(const void *s1, const void *s2) {

```
....
924.        return  (o2 ? setTypeSize(o2) : 0) - (o1 ? setTypeSize(o1) :
0);
```

Use of Uninitialized Variable

Query Path:
CPP\Cx\CPP Medium Threat\Use of Uninitialized Variable System error. Please contact your Checkmarx Administrator:0

Categories

NIST SP 800-53: SC-5 Denial of Service Protection (P1)

Description

Use of Uninitialized Variable\Path 1:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=465
Status	New

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	1318	1505
Object	dfd	dfd

Code Snippet
File Name redis-3.0-annotated/replication.c
Method void syncWithMaster(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
1318.       int dfd, maxtries = 5;
....
1505.       server.repl_transfer_fd = dfd;
```

Use of Uninitialized Variable\Path 2:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=466
Status	New

	Source	Destination

File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	1318	1482
Object	dfd	dfd

Code Snippet
File Name redis-3.0-annotated/replication.c
Method void syncWithMaster(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
1318.       int dfd, maxtries = 5;
....
1482.       if (dfd == -1) {
```

Use of Uninitialized Variable\Path 3:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=467
Status New

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1795	1814
Object	minval	minval

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int randstring(char *target, unsigned int min, unsigned int max) {

```
....
1795.       int minval, maxval;
....
1814.           target[p++] = minval+rand()%(maxval-minval+1);
```

Use of Uninitialized Variable\Path 4:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=468
Status New

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1795	1814
Object	minval	minval

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int randstring(char *target, unsigned int min, unsigned int max) {

```
....
1795.       int minval, maxval;
....
1814.           target[p++] = minval+rand()%(maxval-minval+1);
```

Use of Uninitialized Variable\Path 5:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=469
Status New

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1795	1814
Object	maxval	maxval

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int randstring(char *target, unsigned int min, unsigned int max) {

```
....
1795.       int minval, maxval;
....
1814.           target[p++] = minval+rand()%(maxval-minval+1);
```

Use of Uninitialized Variable\Path 6:

Severity Medium
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=470
Status New

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	969	998
Object	E	E

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method uint64_t hllCount(struct hllhdr *hdr, int *invalid) {

```
....
969.      double E, alpha = 0.7213/(1+1.079/m);
....
998.      E = (1/E)*alpha*m*m;
```

Double Free

Query Path:
CPP\Cx\CPP Medium Threat\Double Free System error. Please contact your Checkmarx Administrator:1

Categories

NIST SP 800-53: SI-16 Memory Protection (P1)

Description

Double Free\Path 1:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=455
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	891	947
Object	line	line

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void repl() {

```
....
891.                    free(line);
....
947.          free(line);
```

Stored Buffer Overflow boundcpy

Query Path:
CPP\Cx\CPP Stored Vulnerabilities\Stored Buffer Overflow boundcpy System error. Please contact your Checkmarx Administrator:1

Categories

NIST SP 800-53: SI-10 Information Input Validation (P1)
OWASP Top 10 2017: A1-Injection

Description

Stored Buffer Overflow boundcpy\Path 1:

Severity	Medium
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=496

Status	New

The size of the buffer used by clusterLoadConfig in argv, at line 105 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterLoadConfig passes to line, at line 105 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	147	193
Object	line	argv

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterLoadConfig(char *filename) {

```
....
147.      while(fgets(line,maxline,fp) != NULL) {
....
193.          memcpy(n->ip,argv[1],strlen(argv[1])+1);
```

Improper Resource Access Authorization

Query Path:
CPP\Cx\CPP Low Visibility\Improper Resource Access Authorization System error. Please contact your Checkmarx Administrator:1

Categories

FISMA 2014: Identification And Authentication
NIST SP 800-53: AC-3 Access Enforcement (P1)
OWASP Top 10 2017: A2-Broken Authentication

Description
Improper Resource Access Authorization\Path 1:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=497
Status	New

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	147	147
Object	fgets	fgets

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterLoadConfig(char *filename) {

```
....
147.      while(fgets(line,maxline,fp) != NULL) {
```

Improper Resource Access Authorization\Path 2:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=498
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3751	3751
Object	fgets	fgets

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int linuxOvercommitMemoryValue(void) {

```
....
3751.      if (fgets(buf,64,fp) == NULL) {
```

Improper Resource Access Authorization\Path 3:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=499
Status	New

	Source	Destination
File	redis-3.0-annotated/zmalloc.c	redis-3.0-annotated/zmalloc.c
Line	335	335
Object	fgets	fgets

Code Snippet
File Name redis-3.0-annotated/zmalloc.c
Method size_t zmalloc_get_private_dirty(void) {

```
....
335.      while(fgets(line,sizeof(line),fp) != NULL) {
```

Improper Resource Access Authorization\Path 4:

Severity	Low
Result State	To Verify
Online Results	http://WIN-

	BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=500
Status	New

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	147	147
Object	line	line

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterLoadConfig(char *filename) {

```
....
147.      while(fgets(line,maxline,fp) != NULL) {
```

Improper Resource Access Authorization\Path 5:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=501
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3751	3751
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int linuxOvercommitMemoryValue(void) {

```
....
3751.      if (fgets(buf,64,fp) == NULL) {
```

Improper Resource Access Authorization\Path 6:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=502
Status	New

	Source	Destination
File	redis-3.0-annotated/zmalloc.c	redis-3.0-annotated/zmalloc.c
Line	335	335

Object	line	line

Code Snippet
File Name redis-3.0-annotated/zmalloc.c
Method size_t zmalloc_get_private_dirty(void) {

```
....
335.      while(fgets(line,sizeof(line),fp) != NULL) {
```

Improper Resource Access Authorization\Path 7:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=503
Status New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	984	984
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static int evalMode(int argc, char **argv) {

```
....
984.      while((nread = fread(buf,1,sizeof(buf),fp)) != 0) {
```

Improper Resource Access Authorization\Path 8:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=504
Status New

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2564	2564
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterReadHandler(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
2564.           nread = read(fd,buf,readlen);
```

Improper Resource Access Authorization\Path 9:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=505
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	781	781
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static sds readArgFromStdin(void) {

```
....
781.           int nread = read(fileno(stdin),buf,1024);
```

Improper Resource Access Authorization\Path 10:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=506
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1078	1078
Object	p	p

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method unsigned long long sendSync(int fd) {

```
....
1078.           nread = read(fd,p,1);
```

Improper Resource Access Authorization\Path 11:

Severity	Low
Result State	To Verify
Online Results	http://WIN-

	BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=507
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1107	1107
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void slaveMode(void) {

```
....
1107.          nread = read(fd,buf,(payload > sizeof(buf)) ? sizeof(buf)
: payload);
```

Improper Resource Access Authorization\Path 12:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=508
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1152	1152
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void getRDB(void) {

```
....
1152.          nread = read(s,buf,(payload > sizeof(buf)) ? sizeof(buf)
: payload);
```

Improper Resource Access Authorization\Path 13:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=509
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c

Line	1210	1210
Object	ibuf	ibuf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1210.                   nread = read(fd,ibuf,sizeof(ibuf));
```

Improper Resource Access Authorization\Path 14:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=510
Status New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1271	1271
Object	obuf	obuf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1271.                       ssize_t nread =
read(STDIN_FILENO,obuf,sizeof(obuf));
```

Improper Resource Access Authorization\Path 15:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=511
Status New

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	766	766
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/replication.c
Method void sendBulkToSlave(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
766.      buflen = read(slave->repldbfd,buf,REDIS_IOBUF_LEN);
```

Improper Resource Access Authorization\Path 16:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=512
Status	New

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	1004	1004
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/replication.c
Method void readSyncBulkPayload(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
1004.      nread = read(fd,buf,readlen);
```

Improper Resource Access Authorization\Path 17:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=513
Status	New

	Source	Destination
File	redis-3.0-annotated/zmalloc.c	redis-3.0-annotated/zmalloc.c
Line	271	271
Object	buf	buf

Code Snippet
File Name redis-3.0-annotated/zmalloc.c
Method size_t zmalloc_get_rss(void) {

```
....
271.      if (read(fd,buf,4096) <= 0) {
```

Improper Resource Access Authorization\Path 18:

Severity	Low
Result State	To Verify
Online Results	http://WIN-

	BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=514
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3981	3981
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int main(int argc, char **argv) {

```
....
3981.                   fprintf(stderr,"Please specify the amount of
memory to test in megabytes.\n");
```

Improper Resource Access Authorization\Path 19:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=515
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3982	3982
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int main(int argc, char **argv) {

```
....
3982.                   fprintf(stderr,"Example: ./redis-server --test-
memory 4096\n\n");
```

Improper Resource Access Authorization\Path 20:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=516
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c

Line	364	364
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void redisLogRaw(int level, const char *msg) {

```
....
364.            fprintf(fp,"%s",msg);
```

Improper Resource Access Authorization\Path 21:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=517
Status New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	372	372
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void redisLogRaw(int level, const char *msg) {

```
....
372.            fprintf(fp,"[%d] %s %c
%s\n",(int)getpid(),buf,c[level],msg);
```

Improper Resource Access Authorization\Path 22:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=518
Status New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3771	3771
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void createPidFile(void) {

```
....
3771.           fprintf(fp,"%d\n",(int)getpid());
```

Improper Resource Access Authorization\Path 23:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=519
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3805	3805
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3805.       fprintf(stderr,"Usage: ./redis-server [/path/to/redis.conf] [options]\n");
```

Improper Resource Access Authorization\Path 24:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=520
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3806	3806
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3806.       fprintf(stderr,"       ./redis-server - (read config from stdin)\n");
```

Improper Resource Access Authorization\Path 25:

Severity	Low

Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=521
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3807	3807
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3807.       fprintf(stderr,"       ./redis-server -v or --version\n");
```

Improper Resource Access Authorization\Path 26:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=522
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3808	3808
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3808.       fprintf(stderr,"       ./redis-server -h or --help\n");
```

Improper Resource Access Authorization\Path 27:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=523
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c

Line	3809	3809
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3809.       fprintf(stderr,"       ./redis-server --test-memory
<megabytes>\n\n");
```

Improper Resource Access Authorization\Path 28:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=524
Status New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3810	3810
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3810.       fprintf(stderr,"Examples:\n");
```

Improper Resource Access Authorization\Path 29:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=525
Status New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3811	3811
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3811.       fprintf(stderr,"       ./redis-server (run the server with
default conf)\n");
```

Improper Resource Access Authorization\Path 30:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=526
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3812	3812
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3812.       fprintf(stderr,"       ./redis-server
/etc/redis/6379.conf\n");
```

Improper Resource Access Authorization\Path 31:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=527
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3813	3813
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3813.       fprintf(stderr,"       ./redis-server --port 7777\n");
```

Improper Resource Access Authorization\Path 32:

Severity	Low

Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=528
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3814	3814
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3814.       fprintf(stderr,"       ./redis-server --port 7777 --slaveof
127.0.0.1 8888\n");
```

Improper Resource Access Authorization\Path 33:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=529
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3815	3815
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3815.       fprintf(stderr,"       ./redis-server /etc/myredis.conf --
loglevel verbose\n\n");
```

Improper Resource Access Authorization\Path 34:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=530
Status	New

	Source	Destination

File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3816	3816
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3816.       fprintf(stderr,"Sentinel mode:\n");
```

Improper Resource Access Authorization\Path 35:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=531
Status New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3817	3817
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void usage() {

```
....
3817.       fprintf(stderr,"       ./redis-server /etc/sentinel.conf --
sentinel\n");
```

Improper Resource Access Authorization\Path 36:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=532
Status New

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	199	199
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c

Method	static void readHandler(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
199.          fprintf(stderr,"Error: %s\n",c->context->errstr);
```

Improper Resource Access Authorization\Path 37:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=533
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	204	204
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method static void readHandler(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
204.                  fprintf(stderr,"Error: %s\n",c->context->errstr);
```

Improper Resource Access Authorization\Path 38:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=534
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	209	209
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method static void readHandler(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
209.                      fprintf(stderr,"Unexpected error reply,
exiting...\n");
```

Improper Resource Access Authorization\Path 39:

Severity	Low

Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=535
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	269	269
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method static void writeHandler(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
269.                    fprintf(stderr, "Writing to socket: %s\n",
strerror(errno));
```

Improper Resource Access Authorization\Path 40:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=536
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	313	313
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method static client createClient(char *cmd, size_t len, client from) {

```
....
313.            fprintf(stderr,"Could not connect to Redis at ");
```

Improper Resource Access Authorization\Path 41:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=537
Status	New

	Source	Destination

File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	315	315
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method static client createClient(char *cmd, size_t len, client from) {

```
....
315.                fprintf(stderr,"%s:%d:
%s\n",config.hostip,config.hostport,c->context->errstr);
```

Improper Resource Access Authorization\Path 42:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=538
Status New

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	317	317
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method static client createClient(char *cmd, size_t len, client from) {

```
....
317.                fprintf(stderr,"%s: %s\n",config.hostsocket,c-
>context->errstr);
```

Improper Resource Access Authorization\Path 43:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=539
Status New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	341	341
Object	fprintf	fprintf

Code Snippet

File Name redis-3.0-annotated/redis-cli.c
Method static int cliConnect(int force) {

```
....
341.                fprintf(stderr,"Could not connect to Redis at ");
```

Improper Resource Access Authorization\Path 44:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=540
Status New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	343	343
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static int cliConnect(int force) {

```
....
343.                    fprintf(stderr,"%s:%d:
%s\n",config.hostip,config.hostport,context->errstr);
```

Improper Resource Access Authorization\Path 45:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=541
Status New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	345	345
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static int cliConnect(int force) {

```
....
345.                    fprintf(stderr,"%s:
%s\n",config.hostsocket,context->errstr);
```

Improper Resource Access Authorization\Path 46:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=542
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	368	368
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void cliPrintContextError() {

```
....
368.        fprintf(stderr,"Error: %s\n",context->errstr);
```

Improper Resource Access Authorization\Path 47:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=543
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	432	432
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static sds cliFormatReplyTTY(redisReply *r, char *prefix) {

```
....
432.            fprintf(stderr,"Unknown reply type: %d\n", r->type);
```

Improper Resource Access Authorization\Path 48:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=544
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	466	466
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static sds cliFormatReplyRaw(redisReply *r) {

```
....
466.            fprintf(stderr,"Unknown reply type: %d\n", r->type);
```

Improper Resource Access Authorization\Path 49:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=545
Status New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	502	502
Object	fprintf	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static sds cliFormatReplyCSV(redisReply *r) {

```
....
502.            fprintf(stderr,"Unknown reply type: %d\n", r->type);
```

Improper Resource Access Authorization\Path 50:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=546
Status New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	677	677
Object	fprintf	fprintf

Code Snippet

File Name	redis-3.0-annotated/redis-cli.c
Method	static redisReply *reconnectingInfo(void) {

```
....
677.                fprintf(stderr, "Error: %s\n", c->errstr);
```

Unchecked Return Value

Query Path:
CPP\Cx\CPP Low Visibility\Unchecked Return Value System error. Please contact your Checkmarx Administrator:1

Categories

NIST SP 800-53: SI-11 Error Handling (P2)

Description

Unchecked Return Value\Path 1:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=40
Status	New

The rdbSaveDoubleValue method calls the snprintf function, at line 589 of redis-3.0-annotated/rdb.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	621	621
Object	snprintf	snprintf

Code Snippet

File Name	redis-3.0-annotated/rdb.c
Method	int rdbSaveDoubleValue(rio *rdb, double val) {

```
....
621.                snprintf((char*)buf+1,sizeof(buf)-1,"%.17g",val);
```

Unchecked Return Value\Path 2:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=41
Status	New

The rdbSave method calls the snprintf function, at line 926 of redis-3.0-annotated/rdb.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	938	938
Object	snprintf	snprintf

Code Snippet
File Name redis-3.0-annotated/rdb.c
Method int rdbSave(char *filename) {

```
....
938.      snprintf(tmpfile,256,"temp-%d.rdb", (int) getpid());
```

Unchecked Return Value\Path 3:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=42
Status	New

The rdbSave method calls the snprintf function, at line 926 of redis-3.0-annotated/rdb.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	954	954
Object	snprintf	snprintf

Code Snippet
File Name redis-3.0-annotated/rdb.c
Method int rdbSave(char *filename) {

```
....
954.      snprintf(magic,sizeof(magic),"REDIS%04d",REDIS_RDB_VERSION);
```

Unchecked Return Value\Path 4:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=43
Status	New

The rdbRemoveTempFile method calls the snprintf function, at line 1149 of redis-3.0-annotated/rdb.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	1152	1152
Object	snprintf	snprintf

Code Snippet
File Name redis-3.0-annotated/rdb.c
Method void rdbRemoveTempFile(pid_t childpid) {

```
....
1152.       snprintf(tmpfile,256,"temp-%d.rdb", (int) childpid);
```

Unchecked Return Value\Path 5:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=44
Status	New

The redisLogRaw method calls the snprintf function, at line 349 of redis-3.0-annotated/redis.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	371	371
Object	snprintf	snprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void redisLogRaw(int level, const char *msg) {

```
....
371.           snprintf(buf+off,sizeof(buf)-
off,"%03d",(int)tv.tv_usec/1000);
```

Unchecked Return Value\Path 6:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=45
Status	New

The bytesToHuman method calls the sprintf function, at line 2936 of redis-3.0-annotated/redis.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	2941	2941
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void bytesToHuman(char *s, unsigned long long n) {

```
....
2941.           sprintf(s,"%lluB",n);
```

Unchecked Return Value\Path 7:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=46
Status	New

The bytesToHuman method calls the sprintf function, at line 2936 of redis-3.0-annotated/redis.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	2945	2945
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void bytesToHuman(char *s, unsigned long long n) {

```
....
2945.           sprintf(s,"%.2fK",d);
```

Unchecked Return Value\Path 8:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=47
Status	New

The bytesToHuman method calls the sprintf function, at line 2936 of redis-3.0-annotated/redis.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	2948	2948
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void bytesToHuman(char *s, unsigned long long n) {

```
....
2948.           sprintf(s,"%.2fM",d);
```

Unchecked Return Value\Path 9:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=48
Status New

The bytesToHuman method calls the sprintf function, at line 2936 of redis-3.0-annotated/redis.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	2951	2951
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void bytesToHuman(char *s, unsigned long long n) {

```
....
2951.           sprintf(s,"%.2fG",d);
```

Unchecked Return Value\Path 10:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=49
Status New

The redisAsciiArt method calls the snprintf function, at line 3821 of redis-3.0-annotated/redis.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3829	3829
Object	snprintf	snprintf

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void redisAsciiArt(void) {

```
....
3829.       snprintf(buf,1024*16,ascii_logo,
```

Unchecked Return Value\Path 11:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=50
Status	New

The cliRefreshPrompt method calls the snprintf function, at line 121 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	135	135
Object	snprintf	snprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void cliRefreshPrompt(void) {

```
....
135.       snprintf(config.prompt+len,sizeof(config.prompt)-len,"> ");
```

Unchecked Return Value\Path 12:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=51
Status	New

The cliFormatReplyTTY method calls the snprintf function, at line 371 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	416	416
Object	snprintf	snprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static sds cliFormatReplyTTY(redisReply *r, char *prefix) {

```
....
416.                snprintf(_prefixfmt,sizeof(_prefixfmt),"%%s%%%dd)
",idxlen);
```

Unchecked Return Value\Path 13:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=52
Status New

The bytesToHuman method calls the sprintf function, at line 1640 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1650	1650
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method void bytesToHuman(char *s, long long n) {

```
....
1650.           sprintf(s,"%lluB",n);
```

Unchecked Return Value\Path 14:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=53
Status New

The bytesToHuman method calls the sprintf function, at line 1640 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1654	1654
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method void bytesToHuman(char *s, long long n) {

```
....
1654.           sprintf(s,"%.2fK",d);
```

Unchecked Return Value\Path 15:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=54
Status	New

The bytesToHuman method calls the sprintf function, at line 1640 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1657	1657
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method void bytesToHuman(char *s, long long n) {

```
....
1657.           sprintf(s,"%.2fM",d);
```

Unchecked Return Value\Path 16:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=55
Status	New

The bytesToHuman method calls the sprintf function, at line 1640 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1660	1660
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method void bytesToHuman(char *s, long long n) {

```
....
1660.           sprintf(s,"%.2fG",d);
```

Unchecked Return Value\Path 17:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=56
Status	New

The statMode method calls the sprintf function, at line 1664 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1690	1690
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void statMode() {

```
....
1690.               sprintf(buf,"db%d:keys",j);
```

Unchecked Return Value\Path 18:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=57
Status	New

The statMode method calls the sprintf function, at line 1664 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1695	1695
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void statMode() {

```
....
1695.           sprintf(buf,"%ld",aux);
```

Unchecked Return Value\Path 19:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=58
Status	New

The statMode method calls the sprintf function, at line 1664 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1705	1705
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void statMode() {

```
....
1705.           sprintf(buf,"%ld",aux);
```

Unchecked Return Value\Path 20:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=59
Status	New

The statMode method calls the sprintf function, at line 1664 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1710	1710
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void statMode() {

```
....
1710.           sprintf(buf,"%ld",aux);
```

Unchecked Return Value\Path 21:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=60
Status	New

The statMode method calls the sprintf function, at line 1664 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1715	1715
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void statMode() {

```
....
1715.           sprintf(buf,"%ld (+%ld)",aux,requests == 0 ? 0 : aux-
requests);
```

Unchecked Return Value\Path 22:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=61
Status	New

The statMode method calls the sprintf function, at line 1664 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1721	1721
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void statMode() {

```
....
1721.           sprintf(buf,"%ld",aux);
```

Unchecked Return Value\Path 23:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=62
Status	New

The slaveTryPartialResynchronization method calls the snprintf function, at line 1207 of redis-3.0-annotated/replication.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	1223	1223
Object	snprintf	snprintf

Code Snippet
File Name redis-3.0-annotated/replication.c
Method int slaveTryPartialResynchronization(int fd) {

```
....
1223.           snprintf(psync_offset,sizeof(psync_offset),"%lld",
server.cached_master->reploff+1);
```

Unchecked Return Value\Path 24:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=63
Status	New

The syncWithMaster method calls the snprintf function, at line 1316 of redis-3.0-annotated/replication.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	1476	1476
Object	snprintf	snprintf

Code Snippet
File Name redis-3.0-annotated/replication.c
Method void syncWithMaster(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
1476.           snprintf(tmpfile,256,
```

Unchecked Return Value\Path 25:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=64
Status New

The *createIntList method calls the sprintf function, at line 1719 of redis-3.0-annotated/ziplist.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1723	1723
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method unsigned char *createIntList() {

```
....
1723.       sprintf(buf, "100");
```

Unchecked Return Value\Path 26:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=65
Status New

The *createIntList method calls the sprintf function, at line 1719 of redis-3.0-annotated/ziplist.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1725	1725
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method unsigned char *createIntList() {

```
....
1725.       sprintf(buf, "128000");
```

Unchecked Return Value\Path 27:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=66
Status	New

The *createIntList method calls the sprintf function, at line 1719 of redis-3.0-annotated/ziplist.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1727	1727
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method unsigned char *createIntList() {

```
....
1727.       sprintf(buf, "-100");
```

Unchecked Return Value\Path 28:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=67
Status	New

The *createIntList method calls the sprintf function, at line 1719 of redis-3.0-annotated/ziplist.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1729	1729
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method unsigned char *createIntList() {

```
....
1729.       sprintf(buf, "4294967296");
```

Unchecked Return Value\Path 29:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=68
Status	New

The *createIntList method calls the sprintf function, at line 1719 of redis-3.0-annotated/ziplist.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1731	1731
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method unsigned char *createIntList() {

```
....
1731.       sprintf(buf, "non integer");
```

Unchecked Return Value\Path 30:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=69
Status	New

The *createIntList method calls the sprintf function, at line 1719 of redis-3.0-annotated/ziplist.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1733	1733
Object	sprintf	sprintf

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method unsigned char *createIntList() {

```
....
1733.       sprintf(buf, "much much longer non integer");
```

Unchecked Return Value\Path 31:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=70
Status New

The zmalloc_get_rss method calls the snprintf function, at line 261 of redis-3.0-annotated/zmalloc.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/zmalloc.c	redis-3.0-annotated/zmalloc.c
Line	269	269
Object	snprintf	snprintf

Code Snippet
File Name redis-3.0-annotated/zmalloc.c
Method size_t zmalloc_get_rss(void) {

```
....
269.       snprintf(filename,256,"/proc/%d/stat",getpid());
```

Unchecked Return Value\Path 32:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=71
Status New

The scanGenericCommand method calls the rv function, at line 664 of redis-3.0-annotated/db.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/db.c	redis-3.0-annotated/db.c
Line	846	846
Object	rv	rv

Code Snippet
File Name redis-3.0-annotated/db.c
Method void scanGenericCommand(redisClient *c, robj *o, unsigned long cursor) {

```
....
846.      rv = snprintf(buf, sizeof(buf), "%lu", cursor);
```

Unchecked Return Value\Path 33:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=72
Status	New

The parseOptions method calls the hostip function, at line 466 of redis-3.0-annotated/redis-benchmark.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	485	485
Object	hostip	hostip

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int parseOptions(int argc, const char **argv) {

```
....
485.              config.hostip = strdup(argv[++i]);
```

Unchecked Return Value\Path 34:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=73
Status	New

The cliRefreshPrompt method calls the len function, at line 121 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	125	125
Object	len	len

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void cliRefreshPrompt(void) {

```
....
125.            len = snprintf(config.prompt,sizeof(config.prompt),"redis
%s",
```

Unchecked Return Value\Path 35:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=74
Status New

The cliRefreshPrompt method calls the len function, at line 121 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	128	128
Object	len	len

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void cliRefreshPrompt(void) {

```
....
128.            len = snprintf(config.prompt,sizeof(config.prompt),
```

Unchecked Return Value\Path 36:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=75
Status New

The cliRefreshPrompt method calls the len function, at line 121 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	133	133
Object	len	len

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void cliRefreshPrompt(void) {

```
....
133.            len += snprintf(config.prompt+len,sizeof(config.prompt)-
len,"[%d]",
```

Unchecked Return Value\Path 37:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=76
Status New

The cliSendCommand method calls the argvlen function, at line 582 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	614	614
Object	argvlen	argvlen

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static int cliSendCommand(int argc, char **argv, int repeat) {

```
....
614.      argvlen = malloc(argc*sizeof(size_t));
```

Unchecked Return Value\Path 38:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=77
Status New

The *getInfoField method calls the result function, at line 1610 of redis-3.0-annotated/redis-cli.c. However, the code does not check the return value from this function, and thus would not detect runtime errors or other unexpected states.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1620	1620
Object	result	result

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static char *getInfoField(char *info, char *field) {

```
....
1620.       result = malloc(sizeof(char)*(n1-p)+1);
```

Use of Insufficiently Random Values

Query Path:
CPP\Cx\CPP Low Visibility\Use of Insufficiently Random Values System error. Please contact your Checkmarx Administrator:0

Categories

FISMA 2014: Media Protection
NIST SP 800-53: SC-28 Protection of Information at Rest (P1)
OWASP Top 10 2017: A3-Sensitive Data Exposure

Description
Use of Insufficiently Random Values\Path 1:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=11
Status	New

Method pfselftestCommand at line 1351 of redis-3.0-annotated/hyperloglog.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1366	1366
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method void pfselftestCommand(redisClient *c) {

```
....
1366.              unsigned int r = rand() & HLL_REGISTER_MAX;
```

Use of Insufficiently Random Values\Path 2:

Severity	Low
Result State	To Verify

Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=12
Status	New

Method pfselftestCommand at line 1351 of redis-3.0-annotated/hyperloglog.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1399	1399
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method void pfselftestCommand(redisClient *c) {

```
....
1399.       uint64_t seed = (uint64_t)rand() | (uint64_t)rand() << 32;
```

Use of Insufficiently Random Values\Path 3:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=13
Status	New

Method pfselftestCommand at line 1351 of redis-3.0-annotated/hyperloglog.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1399	1399
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method void pfselftestCommand(redisClient *c) {

```
....
1399.       uint64_t seed = (uint64_t)rand() | (uint64_t)rand() << 32;
```

Use of Insufficiently Random Values\Path 4:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=14

Status	New

Method main at line 680 of redis-3.0-annotated/intset.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	713	713
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/intset.c
Method int main(int argc, char **argv) {

```
....
713.                is = intsetAdd(is,rand()%0x800,&success);
```

Use of Insufficiently Random Values\Path 5:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=15
Status	New

Method main at line 680 of redis-3.0-annotated/intset.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	792	792
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/intset.c
Method int main(int argc, char **argv) {

```
....
792.            for (i = 0; i < num; i++) intsetSearch(is,rand() %
((1<<bits)-1),NULL);
```

Use of Insufficiently Random Values\Path 6:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=16
Status	New

Method main at line 680 of redis-3.0-annotated/intset.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	800	800
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/intset.c
Method int main(int argc, char **argv) {

```
....
800.              v1 = rand() % 0xfff;
```

Use of Insufficiently Random Values\Path 7:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=17
Status	New

Method main at line 680 of redis-3.0-annotated/intset.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	804	804
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/intset.c
Method int main(int argc, char **argv) {

```
....
804.              v2 = rand() % 0xfff;
```

Use of Insufficiently Random Values\Path 8:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=18
Status	New

Method intsetRandom at line 557 of redis-3.0-annotated/intset.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	561	561
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/intset.c
Method int64_t intsetRandom(intset *is) {

```
....
561.      return _intsetGet(is,rand()%intrev32ifbe(is->length));
```

Use of Insufficiently Random Values\Path 9:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=19
Status	New

Method *createSet at line 645 of redis-3.0-annotated/intset.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	652	652
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/intset.c
Method intset *createSet(int bits, int size) {

```
....
652.              value = (rand()*rand()) & mask;
```

Use of Insufficiently Random Values\Path 10:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=20
Status	New

Method *createSet at line 645 of redis-3.0-annotated/intset.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination

File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	652	652
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/intset.c
Method intset *createSet(int bits, int size) {

```
....
652.                value = (rand()*rand()) & mask;
```

Use of Insufficiently Random Values\Path 11:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=21
Status	New

Method *createSet at line 645 of redis-3.0-annotated/intset.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	654	654
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/intset.c
Method intset *createSet(int bits, int size) {

```
....
654.                value = rand() & mask;
```

Use of Insufficiently Random Values\Path 12:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=22
Status	New

Method pipeMode at line 1175 of redis-3.0-annotated/redis-cli.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c

Line	1287	1287
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1287.                                   magic[j] = rand() & 0xff;
```

Use of Insufficiently Random Values\Path 13:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=23
Status	New

Method main at line 1834 of redis-3.0-annotated/ziplist.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2216	2216
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2216.                 len = rand() % 256;
```

Use of Insufficiently Random Values\Path 14:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=24
Status	New

Method main at line 1834 of redis-3.0-annotated/ziplist.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2220	2220

Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2220.                   where = (rand() & 1) ? ZIPLIST_HEAD :
ZIPLIST_TAIL;
```

Use of Insufficiently Random Values\Path 15:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=25
Status	New

Method main at line 1834 of redis-3.0-annotated/ziplist.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2221	2221
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2221.                   if (rand() % 2) {
```

Use of Insufficiently Random Values\Path 16:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=26
Status	New

Method main at line 1834 of redis-3.0-annotated/ziplist.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2224	2224
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2224.                        switch(rand() % 3) {
```

Use of Insufficiently Random Values\Path 17:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=27
Status	New

Method main at line 1834 of redis-3.0-annotated/ziplist.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2226	2226
Object	rand	rand

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2226.                            buflen = sprintf(buf,"%lld",(0LL +
rand()) >> 20);
```

Use of Insufficiently Random Values\Path 18:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=28
Status	New

Method main at line 1834 of redis-3.0-annotated/ziplist.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2229	2229
Object	rand	rand

Code Snippet

File Name	redis-3.0-annotated/ziplist.c
Method	int main(int argc, char **argv) {

```
....
2229.                           buflen = sprintf(buf,"%lld",(0LL +
rand()));
```

Use of Insufficiently Random Values\Path 19:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=29
Status	New

Method main at line 1834 of redis-3.0-annotated/ziplist.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2232	2232
Object	rand	rand

Code Snippet	
File Name	redis-3.0-annotated/ziplist.c
Method	int main(int argc, char **argv) {

```
....
2232.                           buflen = sprintf(buf,"%lld",(0LL +
rand()) << 20);
```

Use of Insufficiently Random Values\Path 20:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=30
Status	New

Method randstring at line 1792 of redis-3.0-annotated/ziplist.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1794	1794
Object	rand	rand

Code Snippet	
File Name	redis-3.0-annotated/ziplist.c

Method	int randstring(char *target, unsigned int min, unsigned int max) {

```
....
1794.       int len = min+rand()%(max-min+1);
```

Use of Insufficiently Random Values\Path 21:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=31
Status	New

Method randstring at line 1792 of redis-3.0-annotated/ziplist.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1796	1796
Object	rand	rand

Code Snippet	
File Name	redis-3.0-annotated/ziplist.c
Method	int randstring(char *target, unsigned int min, unsigned int max) {

```
....
1796.       switch(rand() % 3) {
```

Use of Insufficiently Random Values\Path 22:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=32
Status	New

Method randstring at line 1792 of redis-3.0-annotated/ziplist.c uses a weak method rand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1814	1814
Object	rand	rand

Code Snippet	
File Name	redis-3.0-annotated/ziplist.c
Method	int randstring(char *target, unsigned int min, unsigned int max) {

```
....
1814.          target[p++] = minval+rand()%(maxval-minval+1);
```

Use of Insufficiently Random Values\Path 23:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=33
Status	New

Method clusterHandleSlaveFailover at line 3214 of redis-3.0-annotated/cluster.c uses a weak method random to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	3282	3282
Object	random	random

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterHandleSlaveFailover(void) {

```
....
3282.              random() % 500; /* Random delay between 0 and 500
milliseconds. */
```

Use of Insufficiently Random Values\Path 24:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=34
Status	New

Method randomizeClientKey at line 154 of redis-3.0-annotated/redis-benchmark.c uses a weak method random to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	159	159
Object	random	random

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method static void randomizeClientKey(client c) {

```
....
159.          size_t r = random() % config.randomkeys_keyspacelen;
```

Use of Insufficiently Random Values\Path 25:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=35
Status	New

Method zslRandomLevel at line 181 of redis-3.0-annotated/t_zset.c uses a weak method random to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	184	184
Object	random	random

Code Snippet
File Name redis-3.0-annotated/t_zset.c
Method int zslRandomLevel(void) {

```
....
184.      while ((random()&0xFFFF) < (ZSKIPLIST_P * 0xFFFF))
```

Use of Insufficiently Random Values\Path 26:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=36
Status	New

Method main at line 3933 of redis-3.0-annotated/redis.c uses a weak method srand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3944	3944
Object	srand	srand

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int main(int argc, char **argv) {

```
....
3944.       srand(time(NULL)^getpid());
```

Use of Insufficiently Random Values\Path 27:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=37
Status	New

Method pipeMode at line 1175 of redis-3.0-annotated/redis-cli.c uses a weak method srand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1187	1187
Object	srand	srand

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1187.       srand(time(NULL));
```

Use of Insufficiently Random Values\Path 28:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=38
Status	New

Method main at line 1834 of redis-3.0-annotated/ziplist.c uses a weak method srand to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1842	1842
Object	srand	srand

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
1842.          srand(atoi(argv[1]));
```

Use of Insufficiently Random Values\Path 29:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=39
Status	New

Method main at line 617 of redis-3.0-annotated/redis-benchmark.c uses a weak method srandom to produce random values. These values might be used for secret values, personal identifiers or cryptographic input, allowing an attacker to guess the value.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	624	624
Object	srandom	srandom

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method int main(int argc, const char **argv) {

```
....
624.       srandom(time(NULL));
```

Unchecked Array Index

Query Path:
CPP\Cx\CPP Low Visibility\Unchecked Array Index System error. Please contact your Checkmarx Administrator:1

Categories

NIST SP 800-53: SI-10 Information Input Validation (P1)

Description

Unchecked Array Index\Path 1:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=261
Status	New

	Source	Destination
File	redis-3.0-annotated/bitops.c	redis-3.0-annotated/bitops.c
Line	275	275
Object	byte	byte

Code Snippet
File Name redis-3.0-annotated/bitops.c
Method void setbitCommand(redisClient *c) {

```
....
275.        ((uint8_t*)o->ptr)[byte] = byteval;
```

Unchecked Array Index\Path 2:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=262
Status New

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	289	289
Object	slot	slot

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterLoadConfig(char *filename) {

```
....
289.                        server.cluster->migrating_slots_to[slot] = cn;
```

Unchecked Array Index\Path 3:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=263
Status New

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	291	291
Object	slot	slot

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterLoadConfig(char *filename) {

```
....
291.                        server.cluster->importing_slots_from[slot] =
cn;
```

Unchecked Array Index\Path 4:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=264
Status	New

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	3936	3936
Object	byte	byte

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void bitmapSetBit(unsigned char *bitmap, int pos) {

```
....
3936.       bitmap[byte] |= 1<<bit;
```

Unchecked Array Index\Path 5:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=265
Status	New

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	3944	3944
Object	byte	byte

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void bitmapClearBit(unsigned char *bitmap, int pos) {

```
....
3944.       bitmap[byte] &= ~(1<<bit);
```

Unchecked Array Index\Path 6:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=266
Status	New

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	4013	4013
Object	slot	slot

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterDelSlot(int slot) {

```
....
4013.       server.cluster->slots[slot] = NULL;
```

Unchecked Array Index\Path 7:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=267
Status New

	Source	Destination
File	redis-3.0-annotated/db.c	redis-3.0-annotated/db.c
Line	1553	1553
Object	num	num

Code Snippet
File Name redis-3.0-annotated/db.c
Method int *sortGetKeys(struct redisCommand *cmd, robj **argv, int argc, int *numkeys) {

```
....
1553.                   keys[num] = i+1; /* <store-key> */
```

Unchecked Array Index\Path 8:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=268
Status New

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	493	493
Object	_byte	_byte

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllDenseAdd(uint8_t *registers, unsigned char *ele, size_t elesize) {

```
....
493.          HLL_DENSE_SET_REGISTER(registers,index,count);
```

Unchecked Array Index\Path 9:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=269
Status New

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	493	493
Object	_byte	_byte

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllDenseAdd(uint8_t *registers, unsigned char *ele, size_t elesize) {

```
....
493.          HLL_DENSE_SET_REGISTER(registers,index,count);
```

Unchecked Array Index\Path 10:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=270
Status New

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	602	602
Object	_byte	_byte

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllSparseToDense(robj *o) {

```
....
602.                  HLL_DENSE_SET_REGISTER(hdr->registers,idx,regval);
```

Unchecked Array Index\Path 11:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=271
Status	New

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	602	602
Object	_byte	_byte

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method int hllSparseToDense(robj *o) {

```
....
602.                    HLL_DENSE_SET_REGISTER(hdr->registers,idx,regval);
```

Unchecked Array Index\Path 12:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=272
Status	New

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1333	1333
Object	_byte	_byte

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method void pfmergeCommand(redisClient *c) {

```
....
1333.           HLL_DENSE_SET_REGISTER(hdr->registers,j,max[j]);
```

Unchecked Array Index\Path 13:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=273
Status	New

	Source	Destination

File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1333	1333
Object	_byte	_byte

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method void pfmergeCommand(redisClient *c) {

```
....
1333.           HLL_DENSE_SET_REGISTER(hdr->registers,j,max[j]);
```

Unchecked Array Index\Path 14:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=274
Status New

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1369	1369
Object	_byte	_byte

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method void pfselftestCommand(redisClient *c) {

```
....
1369.               HLL_DENSE_SET_REGISTER(hdr->registers,i,r);
```

Unchecked Array Index\Path 15:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=275
Status New

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1369	1369
Object	_byte	_byte

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method void pfselftestCommand(redisClient *c) {

```
....
1369.               HLL_DENSE_SET_REGISTER(hdr->registers,i,r);
```

Unchecked Array Index\Path 16:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=276
Status	New

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	120	120
Object	pos	pos

Code Snippet
File Name redis-3.0-annotated/intset.c
Method static void _intsetSet(intset *is, int pos, int64_t value) {

```
....
120.          ((int64_t*)is->contents)[pos] = value;
```

Unchecked Array Index\Path 17:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=277
Status	New

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	123	123
Object	pos	pos

Code Snippet
File Name redis-3.0-annotated/intset.c
Method static void _intsetSet(intset *is, int pos, int64_t value) {

```
....
123.          ((int32_t*)is->contents)[pos] = value;
```

Unchecked Array Index\Path 18:

Severity	Low
Result State	To Verify
Online Results	http://WIN-

	BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=278
Status	New

	Source	Destination
File	redis-3.0-annotated/intset.c	redis-3.0-annotated/intset.c
Line	126	126
Object	pos	pos

Code Snippet
File Name redis-3.0-annotated/intset.c
Method static void _intsetSet(intset *is, int pos, int64_t value) {

```
....
126.          ((int16_t*)is->contents)[pos] = value;
```

Unchecked Array Index\Path 19:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=279
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	1054	1054
Object	ops_sec_idx	ops_sec_idx

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void trackOperationsPerSecond(void) {

```
....
1054.      server.ops_sec_samples[server.ops_sec_idx] = ops_sec;
```

Unchecked Array Index\Path 20:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=280
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	956	956

Object	argc	argc

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static int noninteractive(int argc, char **argv) {

```
....
956.            argv[argc] = readArgFromStdin();
```

Unchecked Array Index\Path 21:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=281
Status New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1803	1803
Object	i	i

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method unsigned long compute_something_fast(void) {

```
....
1803.            s[i] = s[j];
```

Unchecked Array Index\Path 22:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=282
Status New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1804	1804
Object	j	j

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method unsigned long compute_something_fast(void) {

```
....
1804.           s[j] = t;
```

Unchecked Array Index\Path 23:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=283
Status	New

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	207	207
Object	len	len

Code Snippet
File Name redis-3.0-annotated/sds.c
Method void sdsIncrLen(sds s, int incr) {

```
....
207.       s[sh->len] = '\0';
```

Unchecked Array Index\Path 24:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=284
Status	New

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	366	366
Object	len	len

Code Snippet
File Name redis-3.0-annotated/sds.c
Method sds sdstrim(sds s, const char *cset) {

```
....
366.       sh->buf[len] = '\0';
```

Unchecked Array Index\Path 25:

Severity	Low
Result State	To Verify
Online Results	http://WIN-

	BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=285
Status	New

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	1004	1004
Object	vlen	vlen

Code Snippet
File Name redis-3.0-annotated/t_zset.c
Method double zzlGetScore(unsigned char *sptr) {

```
....
1004.           buf[vlen] = '\0';
```

Unchecked Array Index\Path 26:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=286
Status	New

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	208	208
Object	i	i

Code Snippet
File Name redis-3.0-annotated/util.c
Method u2s(uintmax_t x, unsigned base, bool uppercase, char *s, size_t *slen_p)

```
....
208.        s[i] = '\0';
```

Unchecked Array Index\Path 27:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=287
Status	New

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	213	213

Object	i	i

Code Snippet
File Name redis-3.0-annotated/util.c
Method u2s(uintmax_t x, unsigned base, bool uppercase, char *s, size_t *slen_p)

```
....
213.                    s[i] = "0123456789"[x % (uint64_t)10];
```

Unchecked Array Index\Path 28:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=288
Status New

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	224	224
Object	i	i

Code Snippet
File Name redis-3.0-annotated/util.c
Method u2s(uintmax_t x, unsigned base, bool uppercase, char *s, size_t *slen_p)

```
....
224.                    s[i] = digits[x & 0xf];
```

Unchecked Array Index\Path 29:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=289
Status New

	Source	Destination
File	redis-3.0-annotated/util.c	redis-3.0-annotated/util.c
Line	236	236
Object	i	i

Code Snippet
File Name redis-3.0-annotated/util.c
Method u2s(uintmax_t x, unsigned base, bool uppercase, char *s, size_t *slen_p)

```
....
236.                    s[i] = digits[x % (uint64_t)base];
```

Exposure of System Data to Unauthorized Control Sphere

Query Path:
CPP\Cx\CPP Low Visibility\Exposure of System Data to Unauthorized Control Sphere System error. Please contact your Checkmarx Administrator:1

Categories

FISMA 2014: Configuration Management
NIST SP 800-53: AC-3 Access Enforcement (P1)

Description

Exposure of System Data to Unauthorized Control Sphere\Path 1:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=602
Status	New

The system data read by readArgFromStdin in the file redis-3.0-annotated/redis-cli.c at line 776 is potentially exposed by readArgFromStdin found in redis-3.0-annotated/redis-cli.c at line 776.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	785	785
Object	perror	perror

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static sds readArgFromStdin(void) {

```
....
785.             perror("Reading from standard input");
```

Exposure of System Data to Unauthorized Control Sphere\Path 2:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=603
Status	New

The system data read by main in the file redis-3.0-annotated/ziplist.c at line 1834 is potentially exposed by main found in redis-3.0-annotated/ziplist.c at line 1834.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c

Line	1871	1871
Object	perror	perror

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
1871.               if (elen && fwrite(entry,elen,1,stdout) == 0)
perror("fwrite");
```

Exposure of System Data to Unauthorized Control Sphere\Path 3:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=604
Status	New

The system data read by main in the file redis-3.0-annotated/ziplist.c at line 1834 is potentially exposed by main found in redis-3.0-annotated/ziplist.c at line 1834.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1901	1901
Object	perror	perror

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
1901.               if (elen && fwrite(entry,elen,1,stdout) == 0)
perror("fwrite");
```

Exposure of System Data to Unauthorized Control Sphere\Path 4:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=605
Status	New

The system data read by main in the file redis-3.0-annotated/ziplist.c at line 1834 is potentially exposed by main found in redis-3.0-annotated/ziplist.c at line 1834.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1918	1918

Object	perror	perror

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
1918.              if (elen && fwrite(entry,elen,1,stdout) == 0)
perror("fwrite");
```

Exposure of System Data to Unauthorized Control Sphere\Path 5:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=606
Status	New

The system data read by main in the file redis-3.0-annotated/ziplist.c at line 1834 is potentially exposed by main found in redis-3.0-annotated/ziplist.c at line 1834.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1946	1946
Object	perror	perror

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
1946.                  if (elen && fwrite(entry,elen,1,stdout) == 0)
perror("fwrite");
```

Exposure of System Data to Unauthorized Control Sphere\Path 6:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=607
Status	New

The system data read by main in the file redis-3.0-annotated/ziplist.c at line 1834 is potentially exposed by main found in redis-3.0-annotated/ziplist.c at line 1834.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1963	1963
Object	perror	perror

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
1963.                   if (elen && fwrite(entry,elen,1,stdout) == 0)
perror("fwrite");
```

Exposure of System Data to Unauthorized Control Sphere\Path 7:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=608
Status	New

The system data read by main in the file redis-3.0-annotated/ziplist.c at line 1834 is potentially exposed by main found in redis-3.0-annotated/ziplist.c at line 1834.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1980	1980
Object	perror	perror

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
1980.                   if (elen && fwrite(entry,elen,1,stdout) == 0)
perror("fwrite");
```

Exposure of System Data to Unauthorized Control Sphere\Path 8:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=609
Status	New

The system data read by main in the file redis-3.0-annotated/ziplist.c at line 1834 is potentially exposed by main found in redis-3.0-annotated/ziplist.c at line 1834.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2009	2009
Object	perror	perror

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2009.                   if (elen && fwrite(entry,elen,1,stdout) == 0)
perror("fwrite");
```

Exposure of System Data to Unauthorized Control Sphere\Path 9:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=610
Status	New

The system data read by main in the file redis-3.0-annotated/ziplist.c at line 1834 is potentially exposed by main found in redis-3.0-annotated/ziplist.c at line 1834.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2026	2026
Object	perror	perror

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2026.                   if (elen && fwrite(entry,elen,1,stdout) == 0)
perror("fwrite");
```

Exposure of System Data to Unauthorized Control Sphere\Path 10:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=611
Status	New

The system data read by main in the file redis-3.0-annotated/ziplist.c at line 1834 is potentially exposed by main found in redis-3.0-annotated/ziplist.c at line 1834.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2084	2084
Object	perror	perror

Code Snippet

File Name	redis-3.0-annotated/ziplist.c
Method	int main(int argc, char **argv) {

```
....
2084.                           perror("fwrite");
```

Exposure of System Data to Unauthorized Control Sphere\Path 11:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=612
Status	New

The system data read by ziplistRepr in the file redis-3.0-annotated/ziplist.c at line 1650 is potentially exposed by ziplistRepr found in redis-3.0-annotated/ziplist.c at line 1650.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1687	1687
Object	perror	perror

Code Snippet

File Name	redis-3.0-annotated/ziplist.c
Method	void ziplistRepr(unsigned char *zl) {

```
....
1687.                   if (fwrite(p,40,1,stdout) == 0) perror("fwrite");
```

Exposure of System Data to Unauthorized Control Sphere\Path 12:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=613
Status	New

The system data read by ziplistRepr in the file redis-3.0-annotated/ziplist.c at line 1650 is potentially exposed by ziplistRepr found in redis-3.0-annotated/ziplist.c at line 1650.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1691	1691
Object	perror	perror

Code Snippet

File Name	redis-3.0-annotated/ziplist.c
Method	void ziplistRepr(unsigned char *zl) {

```
....
1691.                       fwrite(p,entry.len,1,stdout) == 0)
perror("fwrite");
```

Exposure of System Data to Unauthorized Control Sphere\Path 13:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=614
Status	New

The system data read by pop in the file redis-3.0-annotated/ziplist.c at line 1767 is potentially exposed by pop found in redis-3.0-annotated/ziplist.c at line 1767.

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	1780	1780
Object	perror	perror

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method void pop(unsigned char *zl, int where) {

```
....
1780.              if (vlen && fwrite(vstr,vlen,1,stdout) == 0)
perror("fwrite");
```

Exposure of System Data to Unauthorized Control Sphere\Path 14:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=615
Status	New

The system data read by writeHandler in the file redis-3.0-annotated/redis-benchmark.c at line 244 is potentially exposed by writeHandler found in redis-3.0-annotated/redis-benchmark.c at line 244.

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	269	269
Object	errno	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method static void writeHandler(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
269.                    fprintf(stderr, "Writing to socket: %s\n",
strerror(errno));
```

Exposure of System Data to Unauthorized Control Sphere\Path 15:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=616
Status	New

The system data read by evalMode in the file redis-3.0-annotated/redis-cli.c at line 969 is potentially exposed by evalMode found in redis-3.0-annotated/redis-cli.c at line 969.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	981	980
Object	errno	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static int evalMode(int argc, char **argv) {

```
....
981.                "Can't open file '%s': %s\n", config.eval,
strerror(errno));
....
980.            fprintf(stderr,
```

Exposure of System Data to Unauthorized Control Sphere\Path 16:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=617
Status	New

The system data read by getRDB in the file redis-3.0-annotated/redis-cli.c at line 1128 is potentially exposed by getRDB found in redis-3.0-annotated/redis-cli.c at line 1128.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1144	1159
Object	errno	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void getRDB(void) {

```
....
1144.                   strerror(errno));
....
1159.               fprintf(stderr,"Error writing data to file: %s\n",
```

Exposure of System Data to Unauthorized Control Sphere\Path 17:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=618
Status	New

The system data read by getRDB in the file redis-3.0-annotated/redis-cli.c at line 1128 is potentially exposed by getRDB found in redis-3.0-annotated/redis-cli.c at line 1128.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1160	1159
Object	errno	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void getRDB(void) {

```
....
1160.                   strerror(errno));
....
1159.               fprintf(stderr,"Error writing data to file: %s\n",
```

Exposure of System Data to Unauthorized Control Sphere\Path 18:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=619
Status	New

The system data read by getRDB in the file redis-3.0-annotated/redis-cli.c at line 1128 is potentially exposed by getRDB found in redis-3.0-annotated/redis-cli.c at line 1128.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1144	1143
Object	errno	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void getRDB(void) {

```
....
1144.                   strerror(errno));
....
1143.               fprintf(stderr, "Error opening '%s': %s\n",
config.rdb_filename,
```

Exposure of System Data to Unauthorized Control Sphere\Path 19:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=620
Status	New

The system data read by pipeMode in the file redis-3.0-annotated/redis-cli.c at line 1175 is potentially exposed by pipeMode found in redis-3.0-annotated/redis-cli.c at line 1175.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1213	1294
Object	errno	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1213.                           strerror(errno));
....
1294.                           fprintf(stderr, "Error reading from
stdin: %s\n",
```

Exposure of System Data to Unauthorized Control Sphere\Path 20:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=621
Status	New

The system data read by pipeMode in the file redis-3.0-annotated/redis-cli.c at line 1175 is potentially exposed by pipeMode found in redis-3.0-annotated/redis-cli.c at line 1175.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1259	1294
Object	errno	fprintf

Code Snippet

File Name	redis-3.0-annotated/redis-cli.c
Method	static void pipeMode(void) {

```
....
1259.                                       strerror(errno));
....
1294.                                fprintf(stderr, "Error reading from
stdin: %s\n",
```

Exposure of System Data to Unauthorized Control Sphere\Path 21:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=622
Status	New

The system data read by pipeMode in the file redis-3.0-annotated/redis-cli.c at line 1175 is potentially exposed by pipeMode found in redis-3.0-annotated/redis-cli.c at line 1175.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1295	1294
Object	errno	fprintf

Code Snippet	
File Name	redis-3.0-annotated/redis-cli.c
Method	static void pipeMode(void) {

```
....
1295.                                   strerror(errno));
....
1294.                                fprintf(stderr, "Error reading from
stdin: %s\n",
```

Exposure of System Data to Unauthorized Control Sphere\Path 22:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=623
Status	New

The system data read by pipeMode in the file redis-3.0-annotated/redis-cli.c at line 1175 is potentially exposed by pipeMode found in redis-3.0-annotated/redis-cli.c at line 1175.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1213	1212
Object	errno	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1213.                           strerror(errno));
....
1212.                       fprintf(stderr, "Error reading from the
server: %s\n",
```

Exposure of System Data to Unauthorized Control Sphere\Path 23:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=624
Status	New

The system data read by pipeMode in the file redis-3.0-annotated/redis-cli.c at line 1175 is potentially exposed by pipeMode found in redis-3.0-annotated/redis-cli.c at line 1175.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1259	1212
Object	errno	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1259.                               strerror(errno));
....
1212.                       fprintf(stderr, "Error reading from the
server: %s\n",
```

Exposure of System Data to Unauthorized Control Sphere\Path 24:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=625
Status	New

The system data read by pipeMode in the file redis-3.0-annotated/redis-cli.c at line 1175 is potentially exposed by pipeMode found in redis-3.0-annotated/redis-cli.c at line 1175.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1295	1212

Object	errno	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1295.                                   strerror(errno));
....
1212.                           fprintf(stderr, "Error reading from the
server: %s\n",
```

Exposure of System Data to Unauthorized Control Sphere\Path 25:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=626
Status	New

The system data read by pipeMode in the file redis-3.0-annotated/redis-cli.c at line 1175 is potentially exposed by pipeMode found in redis-3.0-annotated/redis-cli.c at line 1175.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1213	1258
Object	errno	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1213.                               strerror(errno));
....
1258.                                   fprintf(stderr, "Error writing to the
server: %s\n",
```

Exposure of System Data to Unauthorized Control Sphere\Path 26:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=627
Status	New

The system data read by pipeMode in the file redis-3.0-annotated/redis-cli.c at line 1175 is potentially exposed by pipeMode found in redis-3.0-annotated/redis-cli.c at line 1175.

	Source	Destination

File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1259	1258
Object	errno	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1259.                                   strerror(errno));
....
1258.                                 fprintf(stderr, "Error writing to the
server: %s\n",
```

Exposure of System Data to Unauthorized Control Sphere\Path 27:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=628
Status	New

The system data read by pipeMode in the file redis-3.0-annotated/redis-cli.c at line 1175 is potentially exposed by pipeMode found in redis-3.0-annotated/redis-cli.c at line 1175.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1295	1258
Object	errno	fprintf

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void pipeMode(void) {

```
....
1295.                                 strerror(errno));
....
1258.                                 fprintf(stderr, "Error writing to the
server: %s\n",
```

Use of Sizeof On a Pointer Type

Query Path:
CPP\Cx\CPP Low Visibility\Use of Sizeof On a Pointer Type System error. Please contact your Checkmarx Administrator:1

Description

Use of Sizeof On a Pointer Type\Path 1:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=78

Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3648	3661
Object	pool	sizeof

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int freeMemoryIfNeeded(void) {

```
....
3648.                   struct evictionPoolEntry *pool = db-
>eviction_pool;
....
3661.
sizeof(pool[0])*(REDIS_EVICTION_POOL_SIZE-k-1));
```

Use of Sizeof On a Pointer Type\Path 2:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=79
Status	New

	Source	Destination
File	redis-3.0-annotated/bitops.c	redis-3.0-annotated/bitops.c
Line	359	359
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/bitops.c
Method void bitopCommand(redisClient *c) {

```
....
359.      src = zmalloc(sizeof(unsigned char*) * numkeys);
```

Use of Sizeof On a Pointer Type\Path 3:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=80
Status	New

	Source	Destination
File	redis-3.0-annotated/bitops.c	redis-3.0-annotated/bitops.c

Line	363	363
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/bitops.c
Method void bitopCommand(redisClient *c) {

```
....
363.      objects = zmalloc(sizeof(robj*) * numkeys);
```

Use of Sizeof On a Pointer Type\Path 4:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=81
Status New

	Source	Destination
File	redis-3.0-annotated/bitops.c	redis-3.0-annotated/bitops.c
Line	426	426
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/bitops.c
Method void bitopCommand(redisClient *c) {

```
....
426.              memcpy(lp,src,sizeof(unsigned long*)*numkeys);
```

Use of Sizeof On a Pointer Type\Path 5:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=82
Status New

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	942	942
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterNodeAddSlave(clusterNode *master, clusterNode *slave) {

```
....
942.          sizeof(clusterNode*)*(master->numslaves+1));
```

Use of Sizeof On a Pointer Type\Path 6:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=83
Status	New

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	4792	4792
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterCommand(redisClient *c) {

```
....
4792.          keys = zmalloc(sizeof(robj*)*maxkeys);
```

Use of Sizeof On a Pointer Type\Path 7:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=84
Status	New

	Source	Destination
File	redis-3.0-annotated/lgc.c	redis-3.0-annotated/lgc.c
Line	312	312
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/lgc.c
Method static l_mem propagatemark (global_State *g) {

```
....
312.                                  sizeof(Proto *) * p->sizep +
```

Use of Sizeof On a Pointer Type\Path 8:

Severity	Low
Result State	To Verify
Online Results	http://WIN-

	BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=85
Status	New

	Source	Destination
File	redis-3.0-annotated/lgc.c	redis-3.0-annotated/lgc.c
Line	316	316
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/lgc.c
Method static l_mem propagatemark (global_State *g) {

```
....
316.                                sizeof(TString *) * p->sizeupvalues;
```

Use of Sizeof On a Pointer Type\Path 9:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=86
Status	New

	Source	Destination
File	redis-3.0-annotated/multi.c	redis-3.0-annotated/multi.c
Line	89	89
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/multi.c
Method void queueMultiCommand(redisClient *c) {

```
....
89.      mc->argv = zmalloc(sizeof(robj*)*c->argc);
```

Use of Sizeof On a Pointer Type\Path 10:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=87
Status	New

	Source	Destination
File	redis-3.0-annotated/multi.c	redis-3.0-annotated/multi.c
Line	90	90

Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/multi.c
Method void queueMultiCommand(redisClient *c) {

```
....
90.       memcpy(mc->argv,c->argv,sizeof(robj*)*c->argc);
```

Use of Sizeof On a Pointer Type\Path 11:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=88
Status New

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	360	360
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method static client createClient(char *cmd, size_t len, client from) {

```
....
360.              c->randptr = zmalloc(sizeof(char*)*c->randlen);
```

Use of Sizeof On a Pointer Type\Path 12:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=89
Status New

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	372	372
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method static client createClient(char *cmd, size_t len, client from) {

```
....
372.              c->randptr = zmalloc(sizeof(char*)*c->randfree);
```

Use of Sizeof On a Pointer Type\Path 13:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=90
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-benchmark.c	redis-3.0-annotated/redis-benchmark.c
Line	375	375
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/redis-benchmark.c
Method static client createClient(char *cmd, size_t len, client from) {

```
....
375.                      c->randptr = zrealloc(c->randptr,sizeof(char*)*c->randlen*2);
```

Use of Sizeof On a Pointer Type\Path 14:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=91
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	174	174
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void cliInitHelp() {

```
....
174.      int groupslen = sizeof(commandGroups)/sizeof(char*);
```

Use of Sizeof On a Pointer Type\Path 15:

Severity	Low
Result State	To Verify

Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=92
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	235	235
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void cliOutputHelp(int argc, char **argv) {

```
....
235.          len = sizeof(commandGroups)/sizeof(char*);
```

Use of Sizeof On a Pointer Type\Path 16:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=93
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	852	852
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static char **convertToSds(int count, char** args) {

```
....
852.    char **sds = zmalloc(sizeof(char*)*count);
```

Use of Sizeof On a Pointer Type\Path 17:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=94
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c

Line	955	955
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static int noninteractive(int argc, char **argv) {

```
....
955.          argv = zrealloc(argv, (argc+1)*sizeof(char*));
```

Use of Sizeof On a Pointer Type\Path 18:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=95
Status New

	Source	Destination
File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	258	258
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method int luaRedisGenericCommand(lua_State *lua, int raise_error) {

```
....
258.          argv = zmalloc(sizeof(robj*)*argc);
```

Use of Sizeof On a Pointer Type\Path 19:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=96
Status New

	Source	Destination
File	redis-3.0-annotated/scripting.c	redis-3.0-annotated/scripting.c
Line	260	260
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/scripting.c
Method int luaRedisGenericCommand(lua_State *lua, int raise_error) {

```
....
260.          argv = zrealloc(argv,sizeof(robj*)*argc);
```

Use of Sizeof On a Pointer Type\Path 20:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=97
Status	New

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	718	718
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/sds.c
Method sds *sdssplitargs(const char *line, int *argc) {

```
....
718.              vector = zrealloc(vector,((*argc)+1)*sizeof(char*));
```

Use of Sizeof On a Pointer Type\Path 21:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=98
Status	New

	Source	Destination
File	redis-3.0-annotated/sds.c	redis-3.0-annotated/sds.c
Line	724	724
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/sds.c
Method sds *sdssplitargs(const char *line, int *argc) {

```
....
724.              if (vector == NULL) vector = zmalloc(sizeof(void*));
```

Use of Sizeof On a Pointer Type\Path 22:

Severity	Low
Result State	To Verify
Online Results	http://WIN-

	BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=99
Status	New

	Source	Destination
File	redis-3.0-annotated/t_set.c	redis-3.0-annotated/t_set.c
Line	930	930
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/t_set.c
Method void sinterGenericCommand(redisClient *c, robj **setkeys, unsigned long setnum, robj *dstkey) {

```
....
930.      robj **sets = zmalloc(sizeof(robj*)*setnum);
```

Use of Sizeof On a Pointer Type\Path 23:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=100
Status	New

	Source	Destination
File	redis-3.0-annotated/t_set.c	redis-3.0-annotated/t_set.c
Line	976	976
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/t_set.c
Method void sinterGenericCommand(redisClient *c, robj **setkeys, unsigned long setnum, robj *dstkey) {

```
....
976.
qsort(sets,setnum,sizeof(robj*),qsortCompareSetsByCardinality);
```

Use of Sizeof On a Pointer Type\Path 24:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=101
Status	New

	Source	Destination

File	redis-3.0-annotated/t_set.c	redis-3.0-annotated/t_set.c
Line	1124	1124
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/t_set.c
Method void sunionDiffGenericCommand(redisClient *c, robj **setkeys, int setnum, robj *dstkey, int op) {

```
....
1124.       robj **sets = zmalloc(sizeof(robj*)*setnum);
```

Use of Sizeof On a Pointer Type\Path 25:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=102
Status New

	Source	Destination
File	redis-3.0-annotated/t_set.c	redis-3.0-annotated/t_set.c
Line	1197	1197
Object	sizeof	sizeof

Code Snippet
File Name redis-3.0-annotated/t_set.c
Method void sunionDiffGenericCommand(redisClient *c, robj **setkeys, int setnum, robj *dstkey, int op) {

```
....
1197.               qsort(sets+1,setnum-1,sizeof(robj*),
```

NULL Pointer Dereference

Query Path:
CPP\Cx\CPP Low Visibility\NULL Pointer Dereference System error. Please contact your Checkmarx Administrator:1

Categories

NIST SP 800-53: SC-5 Denial of Service Protection (P1)
OWASP Top 10 2017: A1-Injection

Description

NULL Pointer Dereference\Path 1:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=193
Status New

The variable declared in null at redis-3.0-annotated/cluster.c in line 3025 is not initialized when it is used by sndbuf at redis-3.0-annotated/cluster.c in line 2609.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	3026	2612
Object	null	sndbuf

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterPropagatePublish(robj *channel, robj *message) {

```
....
3026.       clusterSendPublish(NULL, channel, message);
```

File Name redis-3.0-annotated/cluster.c
Method void clusterSendMessage(clusterLink *link, unsigned char *msg, size_t msglen) {

```
....
2612.       if (sdslen(link->sndbuf) == 0 && msglen != 0)
```

NULL Pointer Dereference\Path 2:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=194
Status	New

The variable declared in null at redis-3.0-annotated/cluster.c in line 3025 is not initialized when it is used by fd at redis-3.0-annotated/cluster.c in line 2609.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	3026	2613
Object	null	fd

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterPropagatePublish(robj *channel, robj *message) {

```
....
3026.       clusterSendPublish(NULL, channel, message);
```

File Name redis-3.0-annotated/cluster.c

Method	void clusterSendMessage(clusterLink *link, unsigned char *msg, size_t msglen) {

```
....
2613.           aeCreateFileEvent(server.el,link->fd,AE_WRITABLE,
```

NULL Pointer Dereference\Path 3:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=195
Status	New

The variable declared in null at redis-3.0-annotated/db.c in line 864 is not initialized when it is used by type at redis-3.0-annotated/db.c in line 664.

	Source	Destination
File	redis-3.0-annotated/db.c	redis-3.0-annotated/db.c
Line	867	678
Object	null	type

Code Snippet

File Name redis-3.0-annotated/db.c

Method void scanCommand(redisClient *c) {

```
....
867.       scanGenericCommand(c,NULL,cursor);
```

File Name redis-3.0-annotated/db.c

Method void scanGenericCommand(redisClient *c, robj *o, unsigned long cursor) {

```
....
678.       redisAssert(o == NULL || o->type == REDIS_SET || o->type ==
REDIS_HASH ||
```

NULL Pointer Dereference\Path 4:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=196
Status	New

The variable declared in null at redis-3.0-annotated/db.c in line 864 is not initialized when it is used by type at redis-3.0-annotated/db.c in line 664.

	Source	Destination
File	redis-3.0-annotated/db.c	redis-3.0-annotated/db.c

Line	867	678
Object	null	type

Code Snippet
File Name redis-3.0-annotated/db.c
Method void scanCommand(redisClient *c) {

```
....
867.      scanGenericCommand(c,NULL,cursor);
```

File Name redis-3.0-annotated/db.c
Method void scanGenericCommand(redisClient *c, robj *o, unsigned long cursor) {

```
....
678.      redisAssert(o == NULL || o->type == REDIS_SET || o->type ==
REDIS_HASH ||
```

NULL Pointer Dereference\Path 5:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=197
Status	New

The variable declared in null at redis-3.0-annotated/db.c in line 864 is not initialized when it is used by type at redis-3.0-annotated/db.c in line 664.

	Source	Destination
File	redis-3.0-annotated/db.c	redis-3.0-annotated/db.c
Line	867	679
Object	null	type

Code Snippet
File Name redis-3.0-annotated/db.c
Method void scanCommand(redisClient *c) {

```
....
867.      scanGenericCommand(c,NULL,cursor);
```

File Name redis-3.0-annotated/db.c
Method void scanGenericCommand(redisClient *c, robj *o, unsigned long cursor) {

```
....
679.                  o->type == REDIS_ZSET);
```

NULL Pointer Dereference\Path 6:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=198
Status	New

The variable declared in null at redis-3.0-annotated/t_list.c in line 296 is not initialized when it is used by zi at redis-3.0-annotated/t_list.c in line 296.

	Source	Destination
File	redis-3.0-annotated/t_list.c	redis-3.0-annotated/t_list.c
Line	300	307
Object	null	zi

Code Snippet
File Name redis-3.0-annotated/t_list.c
Method robj *listTypeGet(listTypeEntry *entry) {

```
....
300.      robj *value = NULL;
....
307.          redisAssert(entry->zi != NULL);
```

NULL Pointer Dereference\Path 7:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=199
Status	New

The variable declared in null at redis-3.0-annotated/t_list.c in line 296 is not initialized when it is used by ln at redis-3.0-annotated/t_list.c in line 296.

	Source	Destination
File	redis-3.0-annotated/t_list.c	redis-3.0-annotated/t_list.c
Line	300	318
Object	null	ln

Code Snippet
File Name redis-3.0-annotated/t_list.c
Method robj *listTypeGet(listTypeEntry *entry) {

```
....
300.      robj *value = NULL;
....
318.          redisAssert(entry->ln != NULL);
```

NULL Pointer Dereference\Path 8:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=200
Status	New

The variable declared in null at redis-3.0-annotated/t_list.c in line 618 is not initialized when it is used by ptr at redis-3.0-annotated/t_list.c in line 387.

	Source	Destination
File	redis-3.0-annotated/t_list.c	redis-3.0-annotated/t_list.c
Line	620	393
Object	null	ptr

Code Snippet

File Name redis-3.0-annotated/t_list.c

Method void lpushxCommand(redisClient *c) {

```
....
620.      pushxGenericCommand(c,NULL,c->argv[2],REDIS_HEAD);
```

File Name redis-3.0-annotated/t_list.c

Method int listTypeEqual(listTypeEntry *entry, robj *o) {

```
....
393.          return ziplistCompare(entry->zi,o->ptr,sdslen(o->ptr));
```

NULL Pointer Dereference\Path 9:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=201
Status	New

The variable declared in null at redis-3.0-annotated/t_list.c in line 623 is not initialized when it is used by ptr at redis-3.0-annotated/t_list.c in line 387.

	Source	Destination
File	redis-3.0-annotated/t_list.c	redis-3.0-annotated/t_list.c
Line	625	393
Object	null	ptr

Code Snippet

File Name redis-3.0-annotated/t_list.c

Method	void rpushxCommand(redisClient *c) {

```
....
625.      pushxGenericCommand(c,NULL,c->argv[2],REDIS_TAIL);
```

File Name	redis-3.0-annotated/t_list.c
Method	int listTypeEqual(listTypeEntry *entry, robj *o) {

```
....
393.          return ziplistCompare(entry->zi,o->ptr,sdslen(o->ptr));
```

NULL Pointer Dereference\Path 10:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=202
Status	New

The variable declared in null at redis-3.0-annotated/t_list.c in line 618 is not initialized when it is used by ptr at redis-3.0-annotated/t_list.c in line 387.

	Source	Destination
File	redis-3.0-annotated/t_list.c	redis-3.0-annotated/t_list.c
Line	620	393
Object	null	ptr

Code Snippet	
File Name	redis-3.0-annotated/t_list.c
Method	void lpushxCommand(redisClient *c) {

```
....
620.      pushxGenericCommand(c,NULL,c->argv[2],REDIS_HEAD);
```

File Name	redis-3.0-annotated/t_list.c
Method	int listTypeEqual(listTypeEntry *entry, robj *o) {

```
....
393.          return ziplistCompare(entry->zi,o->ptr,sdslen(o->ptr));
```

NULL Pointer Dereference\Path 11:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=203
Status	New

The variable declared in null at redis-3.0-annotated/t_list.c in line 623 is not initialized when it is used by ptr at redis-3.0-annotated/t_list.c in line 387.

	Source	Destination
File	redis-3.0-annotated/t_list.c	redis-3.0-annotated/t_list.c
Line	625	393
Object	null	ptr

Code Snippet
File Name redis-3.0-annotated/t_list.c
Method void rpushxCommand(redisClient *c) {

```
....
625.      pushxGenericCommand(c,NULL,c->argv[2],REDIS_TAIL);
```

File Name redis-3.0-annotated/t_list.c
Method int listTypeEqual(listTypeEntry *entry, robj *o) {

```
....
393.          return ziplistCompare(entry->zi,o->ptr,sdslen(o->ptr));
```

NULL Pointer Dereference\Path 12:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=204
Status New

The variable declared in null at redis-3.0-annotated/t_list.c in line 1499 is not initialized when it is used by bpop at redis-3.0-annotated/t_list.c in line 1139.

	Source	Destination
File	redis-3.0-annotated/t_list.c	redis-3.0-annotated/t_list.c
Line	1575	1159
Object	null	bpop

Code Snippet
File Name redis-3.0-annotated/t_list.c
Method void blockingPopGenericCommand(redisClient *c, int where) {

```
....
1575.      blockForKeys(c, c->argv + 1, c->argc - 2, timeout, NULL);
```

File Name redis-3.0-annotated/t_list.c

Method	void blockForKeys(redisClient *c, robj **keys, int numkeys, mstime_t timeout, robj *target) {

```
....
1159.           if (dictAdd(c->bpop.keys,keys[j],NULL) != DICT_OK)
continue;
```

NULL Pointer Dereference\Path 13:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=205
Status	New

The variable declared in null at redis-3.0-annotated/t_zset.c in line 198 is not initialized when it is used by backward at redis-3.0-annotated/t_zset.c in line 198.

	Source	Destination
File	redis-3.0-annotated/t_zset.c	redis-3.0-annotated/t_zset.c
Line	297	297
Object	null	backward

Code Snippet	
File Name	redis-3.0-annotated/t_zset.c
Method	zskiplistNode *zslInsert(zskiplist *zsl, double score, robj *obj) {

```
....
297.      x->backward = (update[0] == zsl->header) ? NULL : update[0];
```

NULL Pointer Dereference\Path 14:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=206
Status	New

The variable declared in o at redis-3.0-annotated/hyperloglog.c in line 1351 is not initialized when it is used by ptr at redis-3.0-annotated/hyperloglog.c in line 1351.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1355	1417
Object	o	ptr

Code Snippet	
File Name	redis-3.0-annotated/hyperloglog.c
Method	void pfselftestCommand(redisClient *c) {

```
....
1355.       robj *o = NULL;
....
1417.           if (j == checkpoint && hllCount(hdr,NULL) != hllCount(o-
>ptr,NULL)) {
```

NULL Pointer Dereference\Path 15:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=207
Status	New

The variable declared in o at redis-3.0-annotated/hyperloglog.c in line 1351 is not initialized when it is used by ptr at redis-3.0-annotated/hyperloglog.c in line 1351.

	Source	Destination
File	redis-3.0-annotated/hyperloglog.c	redis-3.0-annotated/hyperloglog.c
Line	1355	1409
Object	o	ptr

Code Snippet
File Name redis-3.0-annotated/hyperloglog.c
Method void pfselftestCommand(redisClient *c) {

```
....
1355.       robj *o = NULL;
....
1409.               hdr2 = o->ptr;
```

TOCTOU

Query Path:
CPP\Cx\CPP Low Visibility\TOCTOU System error. Please contact your Checkmarx Administrator:1

Description

TOCTOU\Path 1:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=629
Status	New

The clusterLoadConfig method in redis-3.0-annotated/cluster.c file utilizes fopen that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c

Line	106	106
Object	fopen	fopen

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterLoadConfig(char *filename) {

```
....
106.      FILE *fp = fopen(filename,"r");
```

TOCTOU\Path 2:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=630
Status	New

The rdbSave method in redis-3.0-annotated/rdb.c file utilizes fopen that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	939	939
Object	fopen	fopen

Code Snippet
File Name redis-3.0-annotated/rdb.c
Method int rdbSave(char *filename) {

```
....
939.      fp = fopen(tmpfile,"w");
```

TOCTOU\Path 3:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=631
Status	New

The rdbLoad method in redis-3.0-annotated/rdb.c file utilizes fopen that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	1627	1627
Object	fopen	fopen

Code Snippet
File Name redis-3.0-annotated/rdb.c
Method int rdbLoad(char *filename) {

```
....
1627.       if ((fp = fopen(filename,"r")) == NULL) return REDIS_ERR;
```

TOCTOU\Path 4:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=632
Status	New

The redisLogRaw method in redis-3.0-annotated/redis.c file utilizes fopen that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	360	360
Object	fopen	fopen

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void redisLogRaw(int level, const char *msg) {

```
....
360.       fp = log_to_stdout ? stdout : fopen(server.logfile,"a");
```

TOCTOU\Path 5:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=633
Status	New

The linuxOvercommitMemoryValue method in redis-3.0-annotated/redis.c file utilizes fopen that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3747	3747
Object	fopen	fopen

Code Snippet

File Name	redis-3.0-annotated/redis.c
Method	int linuxOvercommitMemoryValue(void) {

```
....
3747.       FILE *fp = fopen("/proc/sys/vm/overcommit_memory","r");
```

TOCTOU\Path 6:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=634
Status	New

The createPidFile method in redis-3.0-annotated/redis.c file utilizes fopen that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3769	3769
Object	fopen	fopen

Code Snippet	
File Name	redis-3.0-annotated/redis.c
Method	void createPidFile(void) {

```
....
3769.       FILE *fp = fopen(server.pidfile,"w");
```

TOCTOU\Path 7:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=635
Status	New

The evalMode method in redis-3.0-annotated/redis-cli.c file utilizes fopen that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	978	978
Object	fopen	fopen

Code Snippet	
File Name	redis-3.0-annotated/redis-cli.c
Method	static int evalMode(int argc, char **argv) {

```
....
978.        fp = fopen(config.eval,"r");
```

TOCTOU\Path 8:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=636
Status	New

The zmalloc_get_private_dirty method in redis-3.0-annotated/zmalloc.c file utilizes fopen that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/zmalloc.c	redis-3.0-annotated/zmalloc.c
Line	332	332
Object	fopen	fopen

Code Snippet
File Name redis-3.0-annotated/zmalloc.c
Method size_t zmalloc_get_private_dirty(void) {

```
....
332.        FILE *fp = fopen("/proc/self/smaps","r");
```

TOCTOU\Path 9:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=637
Status	New

The clusterSaveConfig method in redis-3.0-annotated/cluster.c file utilizes open that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	365	365
Object	open	open

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterSaveConfig(int do_fsync) {

```
....
365.      if ((fd =
open(server.cluster_configfile,O_WRONLY|O_CREAT,0644))
```

TOCTOU\Path 10:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=638
Status	New

The redisLogFromHandler method in redis-3.0-annotated/redis.c file utilizes open that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	410	410
Object	open	open

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void redisLogFromHandler(int level, const char *msg) {

```
....
410.                          open(server.logfile,
O_APPEND|O_CREAT|O_WRONLY, 0644);
```

TOCTOU\Path 11:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=639
Status	New

The initServer method in redis-3.0-annotated/redis.c file utilizes open that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	2176	2176
Object	open	open

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void initServer() {

```
....
2176.          server.aof_fd = open(server.aof_filename,
```

TOCTOU\Path 12:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=640
Status	New

The daemonize method in redis-3.0-annotated/redis.c file utilizes open that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3785	3785
Object	open	open

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void daemonize(void) {

```
....
3785.      if ((fd = open("/dev/null", O_RDWR, 0)) != -1) {
```

TOCTOU\Path 13:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=641
Status	New

The getRDB method in redis-3.0-annotated/redis-cli.c file utilizes open that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1141	1141
Object	open	open

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void getRDB(void) {

```
....
1141.          fd = open(config.rdb_filename, O_CREAT|O_WRONLY, 0644);
```

TOCTOU\Path 14:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=642
Status	New

The updateSlavesWaitingBgsave method in redis-3.0-annotated/replication.c file utilizes open that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	854	854
Object	open	open

Code Snippet
File Name redis-3.0-annotated/replication.c
Method void updateSlavesWaitingBgsave(int bgsaveerr) {

```
....
854.              if ((slave->repldbfd =
open(server.rdb_filename,O_RDONLY)) == -1 ||
```

TOCTOU\Path 15:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=643
Status	New

The zmalloc_get_rss method in redis-3.0-annotated/zmalloc.c file utilizes open that is accessed by other concurrent functionality in a way that is not thread-safe, which may result in a Race Condition over this resource.

	Source	Destination
File	redis-3.0-annotated/zmalloc.c	redis-3.0-annotated/zmalloc.c
Line	270	270
Object	open	open

Code Snippet
File Name redis-3.0-annotated/zmalloc.c
Method size_t zmalloc_get_rss(void) {

```
....
270.      if ((fd = open(filename,O_RDONLY)) == -1) return 0;
```

Sizeof Pointer Argument

Query Path:
CPP\Cx\CPP Low Visibility\Sizeof Pointer Argument System error. Please contact your Checkmarx Administrator:0

Description

Sizeof Pointer Argument\Path 1:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=250
Status	New

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2121	2121
Object	v	sizeof

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2121.          for (i = 0; i < (sizeof(v)/sizeof(v[0])); i++) {
```

Sizeof Pointer Argument\Path 2:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=251
Status	New

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2121	2121
Object	v	sizeof

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2121.          for (i = 0; i < (sizeof(v)/sizeof(v[0])); i++) {
```

Sizeof Pointer Argument\Path 3:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=252
Status	New

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2130	2130
Object	v	sizeof

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2130.           for (i = 0; i < (sizeof(v)/sizeof(v[0])); i++) {
```

Sizeof Pointer Argument\Path 4:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=253
Status	New

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2130	2130
Object	v	sizeof

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2130.           for (i = 0; i < (sizeof(v)/sizeof(v[0])); i++) {
```

Sizeof Pointer Argument\Path 5:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=254
Status	New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	235	235
Object	commandGroups	sizeof

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void cliOutputHelp(int argc, char **argv) {

```
....
235.          len = sizeof(commandGroups)/sizeof(char*);
```

Sizeof Pointer Argument\Path 6:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=255
Status New

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2121	2122
Object	v	sizeof

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2121.          for (i = 0; i < (sizeof(v)/sizeof(v[0])); i++) {
2122.              memset(v[i], 'a' + i, sizeof(v[0]));
```

Sizeof Pointer Argument\Path 7:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=256
Status New

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	258	258
Object	aux	sizeof

Code Snippet
File Name redis-3.0-annotated/replication.c
Method void replicationFeedSlaves(list *slaves, int dictid, robj **argv, int argc) {

```
....
258.          len = ll2string(aux+1,sizeof(aux)-1,argc);
```

Sizeof Pointer Argument\Path 8:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=257
Status New

	Source	Destination
File	redis-3.0-annotated/replication.c	redis-3.0-annotated/replication.c
Line	271	271
Object	aux	sizeof

Code Snippet
File Name redis-3.0-annotated/replication.c
Method void replicationFeedSlaves(list *slaves, int dictid, robj **argv, int argc) {

```
....
271.              len = ll2string(aux+1,sizeof(aux)-1,objlen);
```

Sizeof Pointer Argument\Path 9:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=258
Status New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3545	3545
Object	pool	sizeof

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void evictionPoolPopulate(dict *sampledict, dict *keydict, struct evictionPoolEntry *pool) {

```
....
3545.                     sizeof(pool[0])*(REDIS_EVICTION_POOL_SIZE-k-
1));
```

Sizeof Pointer Argument\Path 10:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=259
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3545	3552
Object	pool	sizeof

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void evictionPoolPopulate(dict *sampledict, dict *keydict, struct evictionPoolEntry *pool) {

```
....
3545.                       sizeof(pool[0])*(REDIS_EVICTION_POOL_SIZE-k-
1));
....
3552.                   memmove(pool,pool+1,sizeof(pool[0])*k);
```

Sizeof Pointer Argument\Path 11:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=260
Status	New

	Source	Destination
File	redis-3.0-annotated/ziplist.c	redis-3.0-annotated/ziplist.c
Line	2222	2222
Object	buf	sizeof

Code Snippet
File Name redis-3.0-annotated/ziplist.c
Method int main(int argc, char **argv) {

```
....
2222.                       buflen = randstring(buf,1,sizeof(buf)-1);
```

Heuristic 2nd Order Buffer Overflow read

Query Path:
CPP\Cx\CPP Heuristic\Heuristic 2nd Order Buffer Overflow read System error. Please contact your Checkmarx Administrator:0

Categories

PCI DSS v3.2: PCI DSS (3.2) - 6.5.2 - Buffer overflows
NIST SP 800-53: SI-10 Information Input Validation (P1)
OWASP Top 10 2017: A1-Injection

Description

Heuristic 2nd Order Buffer Overflow read\Path 1:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=208
Status	New

The size of the buffer used by clusterReadHandler in readlen, at line 2522 of redis-3.0-annotated/cluster.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that clusterReadHandler passes to buf, at line 2522 of redis-3.0-annotated/cluster.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	2564	2564
Object	buf	readlen

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method void clusterReadHandler(aeEventLoop *el, int fd, void *privdata, int mask) {

```
....
2564.          nread = read(fd,buf,readlen);
```

Heuristic 2nd Order Buffer Overflow read\Path 2:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=209
Status	New

The size of the buffer used by slaveMode in >, at line 1094 of redis-3.0-annotated/redis-cli.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that slaveMode passes to buf, at line 1094 of redis-3.0-annotated/redis-cli.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1107	1107
Object	buf	>

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void slaveMode(void) {

```
....
1107.          nread = read(fd,buf,(payload > sizeof(buf)) ? sizeof(buf)
: payload);
```

Heuristic 2nd Order Buffer Overflow read\Path 3:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=210
Status	New

The size of the buffer used by slaveMode in payload, at line 1094 of redis-3.0-annotated/redis-cli.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that slaveMode passes to buf, at line 1094 of redis-3.0-annotated/redis-cli.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1107	1107
Object	buf	payload

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void slaveMode(void) {

```
....
1107.          nread = read(fd,buf,(payload > sizeof(buf)) ? sizeof(buf)
: payload);
```

Heuristic 2nd Order Buffer Overflow read\Path 4:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=211
Status	New

The size of the buffer used by getRDB in >, at line 1128 of redis-3.0-annotated/redis-cli.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that getRDB passes to buf, at line 1128 of redis-3.0-annotated/redis-cli.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1152	1152
Object	buf	>

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void getRDB(void) {

```
....
1152.           nread = read(s,buf,(payload > sizeof(buf)) ? sizeof(buf)
: payload);
```

Heuristic 2nd Order Buffer Overflow read\Path 5:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=212
Status	New

The size of the buffer used by getRDB in payload, at line 1128 of redis-3.0-annotated/redis-cli.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that getRDB passes to buf, at line 1128 of redis-3.0-annotated/redis-cli.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1152	1152
Object	buf	payload

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void getRDB(void) {

```
....
1152.           nread = read(s,buf,(payload > sizeof(buf)) ? sizeof(buf)
: payload);
```

Heuristic 2nd Order Buffer Overflow read\Path 6:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=213
Status	New

The size of the buffer used by slaveMode in payload, at line 1094 of redis-3.0-annotated/redis-cli.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that slaveMode passes to buf, at line 1094 of redis-3.0-annotated/redis-cli.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1107	1107
Object	buf	payload

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void slaveMode(void) {

```
....
1107.          nread = read(fd,buf,(payload > sizeof(buf)) ? sizeof(buf)
: payload);
```

Heuristic 2nd Order Buffer Overflow read\Path 7:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=214
Status	New

The size of the buffer used by getRDB in payload, at line 1128 of redis-3.0-annotated/redis-cli.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that getRDB passes to buf, at line 1128 of redis-3.0-annotated/redis-cli.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1152	1152
Object	buf	payload

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static void getRDB(void) {

```
....
1152.          nread = read(s,buf,(payload > sizeof(buf)) ? sizeof(buf)
: payload);
```

Incorrect Permission Assignment For Critical Resources

Query Path:
CPP\Cx\CPP Low Visibility\Incorrect Permission Assignment For Critical Resources System error. Please contact your Checkmarx Administrator:1

Categories

FISMA 2014: Access Control
NIST SP 800-53: AC-3 Access Enforcement (P1)
OWASP Top 10 2017: A2-Broken Authentication

Description

Incorrect Permission Assignment For Critical Resources\Path 1:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=595
Status	New

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c

Line	939	939
Object	fp	fp

Code Snippet
File Name redis-3.0-annotated/rdb.c
Method int rdbSave(char *filename) {

```
....
939.        fp = fopen(tmpfile,"w");
```

Incorrect Permission Assignment For Critical Resources\Path 2:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=596
Status New

	Source	Destination
File	redis-3.0-annotated/rdb.c	redis-3.0-annotated/rdb.c
Line	1627	1627
Object	fp	fp

Code Snippet
File Name redis-3.0-annotated/rdb.c
Method int rdbLoad(char *filename) {

```
....
1627.       if ((fp = fopen(filename,"r")) == NULL) return REDIS_ERR;
```

Incorrect Permission Assignment For Critical Resources\Path 3:

Severity Low
Result State To Verify
Online Results http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=597
Status New

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	978	978
Object	fp	fp

Code Snippet
File Name redis-3.0-annotated/redis-cli.c
Method static int evalMode(int argc, char **argv) {

```
....
978.        fp = fopen(config.eval,"r");
```

Incorrect Permission Assignment For Critical Resources\Path 4:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=598
Status	New

	Source	Destination
File	redis-3.0-annotated/cluster.c	redis-3.0-annotated/cluster.c
Line	106	106
Object	fp	fp

Code Snippet
File Name redis-3.0-annotated/cluster.c
Method int clusterLoadConfig(char *filename) {

```
....
106.        FILE *fp = fopen(filename,"r");
```

Incorrect Permission Assignment For Critical Resources\Path 5:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=599
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3747	3747
Object	fp	fp

Code Snippet
File Name redis-3.0-annotated/redis.c
Method int linuxOvercommitMemoryValue(void) {

```
....
3747.       FILE *fp = fopen("/proc/sys/vm/overcommit_memory","r");
```

Incorrect Permission Assignment For Critical Resources\Path 6:

Severity	Low
Result State	To Verify
Online Results	http://WIN-

	BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=600
Status	New

	Source	Destination
File	redis-3.0-annotated/redis.c	redis-3.0-annotated/redis.c
Line	3769	3769
Object	fp	fp

Code Snippet
File Name redis-3.0-annotated/redis.c
Method void createPidFile(void) {

```
....
3769.       FILE *fp = fopen(server.pidfile,"w");
```

Incorrect Permission Assignment For Critical Resources\Path 7:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=601
Status	New

	Source	Destination
File	redis-3.0-annotated/zmalloc.c	redis-3.0-annotated/zmalloc.c
Line	332	332
Object	fp	fp

Code Snippet
File Name redis-3.0-annotated/zmalloc.c
Method size_t zmalloc_get_private_dirty(void) {

```
....
332.       FILE *fp = fopen("/proc/self/smaps","r");
```

Heuristic Buffer Overflow malloc

Query Path:
CPP\Cx\CPP Heuristic\Heuristic Buffer Overflow malloc System error. Please contact your Checkmarx Administrator:0

Categories

PCI DSS v3.2: PCI DSS (3.2) - 6.5.2 - Buffer overflows
NIST SP 800-53: SI-10 Information Input Validation (P1)
OWASP Top 10 2017: A1-Injection

Description

Heuristic Buffer Overflow malloc\Path 1:

Severity	Low

Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=215
Status	New

The size of the buffer used by cliSendCommand in argc, at line 582 of redis-3.0-annotated/redis-cli.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that main passes to argc, at line 1846 of redis-3.0-annotated/redis-cli.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1846	614
Object	argc	argc

Code Snippet

File Name redis-3.0-annotated/redis-cli.c

Method int main(int argc, char **argv) {

```
....
1846.  int main(int argc, char **argv) {
```

File Name redis-3.0-annotated/redis-cli.c

Method static int cliSendCommand(int argc, char **argv, int repeat) {

```
....
614.      argvlen = malloc(argc*sizeof(size_t));
```

Heuristic Buffer Overflow malloc\Path 2:

Severity	Low
Result State	To Verify
Online Results	http://WIN-BA8RD5TJ8IG/CxWebClient/ViewerMain.aspx?scanid=1050093&projectid=50083&pathid=216
Status	New

The size of the buffer used by cliSendCommand in BinaryExpr, at line 582 of redis-3.0-annotated/redis-cli.c, is not properly verified before writing data to the buffer. This can enable a buffer overflow attack, using the source buffer that main passes to argc, at line 1846 of redis-3.0-annotated/redis-cli.c, to overwrite the target buffer.

	Source	Destination
File	redis-3.0-annotated/redis-cli.c	redis-3.0-annotated/redis-cli.c
Line	1846	614
Object	argc	BinaryExpr

Code Snippet

File Name redis-3.0-annotated/redis-cli.c

Method int main(int argc, char **argv) {

```
....
1846.  int main(int argc, char **argv) {
```

File Name redis-3.0-annotated/redis-cli.c

Method static int cliSendCommand(int argc, char **argv, int repeat) {

```
....
614.      argvlen = malloc(argc*sizeof(size_t));
```

Buffer Overflow LongString

Risk

What might happen

Buffer overflow attacks, in their various forms, could allow an attacker to control certain areas of memory. Typically, this is used to overwrite data on the stack necessary for the program to function properly, such as code and memory addresses, though other forms of this attack exist. Exploiting this vulnerability can generally lead to system crashes, infinite loops, or even execution of arbitrary code.

Cause

How does it happen

Buffer Overflows can manifest in numerous different variations. In it's most basic form, the attack controls a buffer, which is then copied to a smaller buffer without size verification. Because the attacker's source buffer is larger than the program's target buffer, the attacker's data overwrites whatever is next on the stack, allowing the attacker to control program structures.
Alternatively, the vulnerability could be the result of improper bounds checking; exposing internal memory addresses outside of their valid scope; allowing the attacker to control the size of the target buffer; or various other forms.

General Recommendations

How to avoid it

- Always perform proper bounds checking before copying buffers or strings.
- Prefer to use safer functions and structures, e.g. safe string classes over `char*`, `strncpy` over `strcpy`, and so on.
- Consistently apply tests for the size of buffers.
- Do not return variable addresses outside the scope of their variables.

Source Code Examples

Buffer Overflow IndexFromInput

Risk

What might happen

Buffer overflow attacks, in their various forms, could allow an attacker to control certain areas of memory. Typically, this is used to overwrite data on the stack necessary for the program to function properly, such as code and memory addresses, though other forms of this attack exist. Exploiting this vulnerability can generally lead to system crashes, infinite loops, or even execution of arbitrary code.

Cause

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Alternatively, the vulnerability could be the result of improper bounds checking; exposing internal memory addresses outside of their valid scope; allowing the attacker to control the size of the target buffer; or various other forms.

General Recommendations

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- Always perform proper bounds checking before copying buffers or strings.
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- Consistently apply tests for the size of buffers.
- Do not return variable addresses outside the scope of their variables.

Source Code Examples

Improper Null Termination

Weakness ID: 170 *(Weakness Base)* **Status:** Incomplete

Description

Description Summary

The software does not terminate or incorrectly terminates a string or array with a null character or equivalent terminator.

Extended Description

Null termination errors frequently occur in two different ways. An off-by-one error could cause a null to be written out of bounds, leading to an overflow. Or, a program could use a strncpy() function call incorrectly, which prevents a null terminator from being added at all. Other scenarios are possible.

Time of Introduction

- Implementation

Applicable Platforms

Languages

C

C++

Platform Notes

Conceptually, this does not just apply to the C language; any language or representation that involves a terminator could have this type of problem.

Common Consequences

Scope	Effect
Confidentiality Integrity	The case of an omitted null character is the most dangerous of the possible issues. This will almost certainly result in information disclosure, and possibly a buffer overflow condition, which may be exploited to execute arbitrary code.
Confidentiality Integrity Availability	If a null character is omitted from a string, then most string-copying functions will read data until they locate a null character, even outside of the intended boundaries of the string. This could: • cause a crash due to a segmentation fault • cause sensitive adjacent memory to be copied and sent to an outsider • trigger a buffer overflow when the copy is bering written to a fixed-size buffer
Integrity Availability	Misplaced null characters may result in any number of security problems. The biggest issue is a subset of buffer overflow, and write-what-where conditions, where data corruption occurs from the writing of a null character over valid data, or even instructions. A randomly placed null character may put the system into an undefined state, and therefore make it prone to crashing. A misplaced null character may corrupt other data in memory
Access Control	Should the null character corrupt the process flow, or affect a flag controlling access, it may lead to logical errors which allow for the execution of arbitrary code.

Likelihood of Exploit

Medium

Demonstrative Examples

Example 1

The following code reads from cfgfile and copies the input into inputbuf using strcpy(). The code mistakenly assumes that inputbuf will always contain a NULL terminator.

(Bad Code)

Example Language: **C**

```
#define MAXLEN 1024
...
char *pathbuf[MAXLEN];
...
read(cfgfile,inputbuf,MAXLEN); //does not null terminate
strcpy(pathbuf,input_buf); //requires null terminated input
...
```

The code above will behave correctly if the data read from cfgfile is null terminated on disk as expected. But if an attacker is able to modify this input so that it does not contain the expected NULL character, the call to strcpy() will continue copying from memory until it encounters an arbitrary NULL character. This will likely overflow the destination buffer and, if the attacker can control the contents of memory immediately following inputbuf, can leave the application susceptible to a buffer overflow attack.

Example 2

In the following code, readlink() expands the name of a symbolic link stored in the buffer path so that the buffer filename contains the absolute path of the file referenced by the symbolic link. The length of the resulting value is then calculated using strlen().

(Bad Code)

Example Language: **C**

```
char buf[MAXPATH];
...
readlink(path, buf, MAXPATH);
int length = strlen(filename);
...
```

The code above will not behave correctly because the value read into buf by readlink() will not be null terminated. In testing, vulnerabilities like this one might not be caught because the unused contents of buf and the memory immediately following it may be NULL, thereby causing strlen() to appear as if it is behaving correctly. However, in the wild strlen() will continue traversing memory until it encounters an arbitrary NULL character on the stack, which results in a value of length that is much larger than the size of buf and may cause a buffer overflow in subsequent uses of this value. Buffer overflows aside, whenever a single call to readlink() returns the same value that has been passed to its third argument, it is impossible to know whether the name is precisely that many bytes long, or whether readlink() has truncated the name to avoid overrunning the buffer. Traditionally, strings are represented as a region of memory containing data terminated with a NULL character. Older string-handling methods frequently rely on this NULL character to determine the length of the string. If a buffer that does not contain a NULL terminator is passed to one of these functions, the function will read past the end of the buffer. Malicious users typically exploit this type of vulnerability by injecting data with unexpected size or content into the application. They may provide the malicious input either directly as input to the program or indirectly by modifying application resources, such as configuration files. In the event that an attacker causes the application to read beyond the bounds of a buffer, the attacker may be able use a resulting buffer overflow to inject and execute arbitrary code on the system.

Example 3

While the following example is not exploitable, it provides a good example of how nulls can be omitted or misplaced, even when "safe" functions are used:

(Bad Code)

Example Language: **C**

```
#include <stdio.h>
#include <string.h>

int main() {

char longString[] = "String signifying nothing";
char shortString[16];

strncpy(shortString, longString, 16);
printf("The last character in shortString is: %c %1$x\n", shortString[15]);
return (0);
}
```

The above code gives the following output: The last character in shortString is: l 6c So, the shortString array does not end in a NULL character, even though the "safe" string function strncpy() was used.

Observed Examples

Reference	Description
CVE-2000-0312	Attacker does not null-terminate argv[] when invoking another program.
CVE-2003-0777	Interrupted step causes resultant lack of null termination.
CVE-2004-1072	Fault causes resultant lack of null termination, leading to buffer expansion.
CVE-2001-1389	Multiple vulnerabilities related to improper null termination.
CVE-2003-0143	Product does not null terminate a message buffer after snprintf-like call, leading to overflow.

Potential Mitigations

Phase: Requirements

Use a language that is not susceptible to these issues. However, be careful of null byte interaction errors (CWE-626) with lower-level constructs that may be written in a language that is susceptible.

Phase: Implementation

Ensure that all string functions used are understood fully as to how they append null characters. Also, be wary of off-by-one errors when appending nulls to the end of strings.

Phase: Implementation

If performance constraints permit, special code can be added that validates null-termination of string buffers, this is a rather naive and error-prone solution.

Phase: Implementation

Switch to bounded string manipulation functions. Inspect buffer lengths involved in the buffer overrun trace reported with the defect.

Phase: Implementation

Add code that fills buffers with nulls (however, the length of buffers still needs to be inspected, to ensure that the non null-terminated string is not written at the physical end of the buffer).

Weakness Ordinalities

Ordinality	Description
Resultant	*(where the weakness is typically related to the presence of some other weaknesses)*

Relationships

Nature	Type	ID	Name	View(s) this relationship pertains to
ChildOf	Weakness Class	20	Improper Input Validation	**Seven Pernicious Kingdoms (primary)700**
ChildOf	Category	169	Technology-Specific	**Development**

			Special Elements	**Concepts (primary)699**
ChildOf	Weakness Class	707	Improper Enforcement of Message or Data Structure	**Research Concepts (primary)1000**
ChildOf	Category	730	OWASP Top Ten 2004 Category A9 - Denial of Service	**Weaknesses in OWASP Top Ten (2004) (primary)711**
ChildOf	Category	741	CERT C Secure Coding Section 07 - Characters and Strings (STR)	**Weaknesses Addressed by the CERT C Secure Coding Standard (primary)734**
ChildOf	Category	748	CERT C Secure Coding Section 50 - POSIX (POS)	Weaknesses Addressed by the CERT C Secure Coding Standard734
CanPrecede	Weakness Base	120	Buffer Copy without Checking Size of Input ('Classic Buffer Overflow')	Research Concepts1000
CanPrecede	Weakness Variant	126	Buffer Over-read	Research Concepts1000
PeerOf	Weakness Base	463	Deletion of Data Structure Sentinel	Research Concepts1000
PeerOf	Weakness Base	464	Addition of Data Structure Sentinel	Research Concepts1000
CanAlsoBe	Weakness Variant	147	Improper Neutralization of Input Terminators	Research Concepts1000
MemberOf	View	630	Weaknesses Examined by SAMATE	**Weaknesses Examined by SAMATE (primary)630**
CanFollow	Weakness Base	193	Off-by-one Error	Research Concepts1000
CanFollow	Weakness Class	682	Incorrect Calculation	Research Concepts1000

Relationship Notes

Factors: this is usually resultant from other weaknesses such as off-by-one errors, but it can be primary to boundary condition violations such as buffer overflows. In buffer overflows, it can act as an expander for assumed-immutable data.

Overlaps missing input terminator.

f Causal Nature

Explicit

Taxonomy Mappings

Mapped Taxonomy Name	Node ID	Fit	Mapped Node Name
PLOVER			Improper Null Termination
7 Pernicious Kingdoms			String Termination Error
CLASP			Miscalculated null termination
OWASP Top Ten 2004	A9	CWE More Specific	Denial of Service
CERT C Secure Coding	POS30-C		Use the readlink() function properly
CERT C Secure Coding	STR03-C		Do not inadvertently truncate a null-terminated byte string
CERT C Secure Coding	STR32-C		Null-terminate byte strings as required

White Box Definitions

A weakness where the code path has:

1. end statement that passes a data item to a null-terminated string function
2. start statement that produces the improper null-terminated data item

Where "produces" is defined through the following scenarios:

1. data item never ended with null-terminator
2. null-terminator is re-written

Maintenance Notes

As currently described, this entry is more like a category than a weakness.

Content History

Submissions			
Submission Date	**Submitter**	**Organization**	**Source**
	PLOVER		Externally Mined
Modifications			
Modification Date	**Modifier**	**Organization**	**Source**
2008-07-01	Eric Dalci	Cigital	External
	updated Time of Introduction		
2008-08-01		KDM Analytics	External
	added/updated white box definitions		
2008-09-08	CWE Content Team	MITRE	Internal
	updated Applicable Platforms, Causal Nature, Common Consequences, Description, Likelihood of Exploit, Maintenance Notes, Relationships, Other Notes, Relationship Notes, Taxonomy Mappings, Weakness Ordinalities		
2008-11-24	CWE Content Team	MITRE	Internal
	updated Relationships, Taxonomy Mappings		
2009-03-10	CWE Content Team	MITRE	Internal
	updated Common Consequences		
2009-05-27	CWE Content Team	MITRE	Internal
	updated Demonstrative Examples		
2009-07-17	KDM Analytics		External
	Improved the White Box Definition		
2009-07-27	CWE Content Team	MITRE	Internal
	updated Common Consequences, Other Notes, Potential Mitigations, White Box Definitions		
2009-10-29	CWE Content Team	MITRE	Internal
	updated Description		

BACK TO TOP

Divide By Zero

Risk

What might happen

When a program divides a number by zero, an exception will be raised. If this exception is not handled by the application, unexpected results may occur, including crashing the application. This can be considered a DoS (Denial of Service) attack, if an external user has control of the value of the denominator or can cause this error to occur.

Cause

How does it happen

The program receives an unexpected value, and uses it for division without filtering, validation, or verifying that the value is not zero. The application does not explicitly handle this error or prevent division by zero from occuring.

General Recommendations

How to avoid it

- Before dividing by an unknown value, validate the number and explicitly ensure it does not evaluate to zero.
- Validate all untrusted input from all sources, in particular verifying that it is not zero before dividing with it.
- Verify output of methods, calculations, dictionary lookups, and so on, and ensure it is not zero before dividing with the result.
- Ensure divide-by-zero errors are caught and handled appropriately.

Source Code Examples

Java

Divide by Zero

```
public float getAverage(HttpServletRequest req) {
      int total = Integer.parseInt(req.getParameter("total"));
      int count = Integer.parseInt(req.getParameter("count"));

      return total / count;
}
```

Checked Division

```
public float getAverage(HttpServletRequest req) {
      int total = Integer.parseInt(req.getParameter("total"));
      int count = Integer.parseInt(req.getParameter("count"));

      if (count > 0)
            return total / count;
      else
```

```
            return 0;
}
```

Buffer Overflow AddressOfLocalVarReturned

Risk

What might happen

A use after free error will cause code to use an area of memory previously assigned with a specific value, which has since been freed and may have been overwritten by another value. This error will likely cause unexpected behavior, memory corruption and crash errors. In some cases where the freed and used section of memory is used to determine execution flow, and the error can be induced by an attacker, this may result in execution of malicious code.

Cause

How does it happen

Pointers to variables allow code to have an address with a set size to a dynamically allocated variable. Eventually, the pointer's destination may become free - either explicitly in code, such as when programmatically freeing this variable, or implicitly, such as when a local variable is returned - once it is returned, the variable's scope is released. Once freed, this memory will be re-used by the application, overwritten with new data. At this point, dereferencing this pointer will potentially resolve newly written and unexpected data.

General Recommendations

How to avoid it

- Do not return local variables or pointers
- Review code to ensure no flow allows use of a pointer after it has been explicitly freed

---

Source Code Examples

CPP

Use of Variable after It was Freed

```
free(input);
printf("%s", input);
```

Use of Pointer to Local Variable That Was Freed On Return

```
int* func1()
{
	int i;
	i = 1;
	return &i;
}

void func2()

{

	int j;
	j = 5;
```

```
}

//..
	int * i = func1();
	printf("%d\r\n", *i); // Output could be 1 or Segmentation Fault
	func2();
	printf("%d\r\n", *i); // Output is 5, which is j's value, as func2() overwrote data in
the stack
//..
```

Buffer Overflow boundcpy WrongSizeParam

Risk

What might happen

Buffer overflow attacks, in their various forms, could allow an attacker to control certain areas of memory. Typically, this is used to overwrite data on the stack necessary for the program to function properly, such as code and memory addresses, though other forms of this attack exist. Exploiting this vulnerability can generally lead to system crashes, infinite loops, or even execution of arbitrary code.

Cause

How does it happen

Buffer Overflows can manifest in numerous different variations. In it's most basic form, the attack controls a buffer, which is then copied to a smaller buffer without size verification. Because the attacker's source buffer is larger than the program's target buffer, the attacker's data overwrites whatever is next on the stack, allowing the attacker to control program structures.
Alternatively, the vulnerability could be the result of improper bounds checking; exposing internal memory addresses outside of their valid scope; allowing the attacker to control the size of the target buffer; or various other forms.

General Recommendations

How to avoid it

- Always perform proper bounds checking before copying buffers or strings.
- Prefer to use safer functions and structures, e.g. safe string classes over `char*`, `strncpy` over `strcpy`, and so on.
- Consistently apply tests for the size of buffers.
- Do not return variable addresses outside the scope of their variables.

Source Code Examples

MemoryFree on StackVariable

Risk

What might happen

Undefined Behavior may result with a crash. Crashes may give an attacker valuable information about the system and the program internals. Furthermore, it may leave unprotected files (e.g memory) that may be exploited.

Cause

How does it happen

Calling free() on a variable that was not dynamically allocated (e.g. malloc) will result with an Undefined Behavior.

General Recommendations

How to avoid it

Use free() only on dynamically allocated variables in order to prevent unexpected behavior from the compiler.

Source Code Examples

CPP

Bad - Calling free() on a static variable

```
void clean_up(){
  char temp[256];
  do_something();
  free(tmp);
  return;
}
```

Good - Calling free() only on variables that were dynamically allocated

```
void clean_up(){
  char *buff;
  buff = (char*) malloc(1024);
  free(buff);
  return;
}
```

Char Overflow

Risk

What might happen

Assigning large data types into smaller data types, without proper checks and explicit casting, will lead to undefined behavior and unintentional effects, such as data corruption (e.g. value wraparound, wherein maximum values become minimum values); system crashes; infinite loops; logic errors, such as bypassing of security mechanisms; or even buffer overflows leading to arbitrary code execution.

Cause

How does it happen

This flaw can occur when implicitly casting numerical data types of a larger size, into a variable with a data type of a smaller size. This forces the program to discard some bits of information from the number. Depending on how the numerical data types are stored in memory, this is often the bits with the highest value, causing substantial corruption of the stored number. Alternatively, the sign bit of a signed integer could be lost, completely reversing the intention of the number.

General Recommendations

How to avoid it

- Avoid casting larger data types to smaller types.
- Prefer promoting the target variable to a large enough data type.
- If downcasting is necessary, always check that values are valid and in range of the target type, before casting

---

Source Code Examples

CPP

Unsafe Downsize Casting

```
int unsafe_addition(short op1, int op2) {

    // op2 gets forced from int into a short
    short total = op1 + op2;

    return total;
}
```

Safer Use of Proper Data Types

```
int safe_addition(short op1, int op2) {

    // total variable is of type int, the largest type that is needed
    int total = 0;

    // check if total will overflow available integer size
    if (INT_MAX - abs(op2) > op1)
    {
        total = op1 + op2;
    }
    else
```

```
    {
        // instead of overflow, saturate (but this is not always a good thing)
        total = INT_MAX
    }

    return total;
}
```

Integer Overflow

Risk

What might happen

Assigning large data types into smaller data types, without proper checks and explicit casting, will lead to undefined behavior and unintentional effects, such as data corruption (e.g. value wraparound, wherein maximum values become minimum values); system crashes; infinite loops; logic errors, such as bypassing of security mechanisms; or even buffer overflows leading to arbitrary code execution.

Cause

How does it happen

This flaw can occur when implicitly casting numerical data types of a larger size, into a variable with a data type of a smaller size. This forces the program to discard some bits of information from the number. Depending on how the numerical data types are stored in memory, this is often the bits with the highest value, causing substantial corruption of the stored number. Alternatively, the sign bit of a signed integer could be lost, completely reversing the intention of the number.

General Recommendations

How to avoid it

- Avoid casting larger data types to smaller types.
- Prefer promoting the target variable to a large enough data type.
- If downcasting is necessary, always check that values are valid and in range of the target type, before casting

---

Source Code Examples

Dangerous Functions

Risk

What might happen

Use of dangerous functions may expose varying risks associated with each particular function, with potential impact of improper usage of these functions varying significantly. The presence of such functions indicates a flaw in code maintenance policies and adherence to secure coding practices, in a way that has allowed introducing known dangerous code into the application.

Cause

How does it happen

A dangerous function has been identified within the code. Functions are often deemed dangerous to use for numerous reasons, as there are different sets of vulnerabilities associated with usage of such functions. For example, some string copy and concatenation functions are vulnerable to Buffer Overflow, Memory Disclosure, Denial of Service and more. Use of these functions is not recommended.

General Recommendations

How to avoid it

- Deploy a secure and recommended alternative to any functions that were identified as dangerous.
    - If no secure alternative is found, conduct further researching and testing to identify whether current usage successfully sanitizes and verifies values, and thus successfully avoids the use-cases for whom the function is indeed dangerous
- Conduct a periodical review of methods that are in use, to ensure that all external libraries and built-in functions are up-to-date and whose use has not been excluded from best secure coding practices.

Source Code Examples

CPP

Buffer Overflow in gets()

```
int main()
{
	char buf[10];

	printf("Please enter your name: ");
	gets(buf); // veryveryverylongname
	if (buf == ACCEPTED_NAME)
	{
		// Do something
	}
	return 0;
}
```

Safe reading from user

```
int main()

{

	char buf[10];

	printf("Please enter your name: ");
	fgets(buf, sizeof(buf), stdin); //setting the amount of bytes to read
	if (buf == ACCEPTED_NAME)
	{
		//Do something
	}
	return 0;
}
```

Unsafe function for string copy

```
int main(int argc, char* argv[])

{

	char buf[10];
	strcpy(buf, argv[1]); // overflow occurs when len(argv[1]) > 10 bytes

	return 0;
}
```

Safe string copy

```
int main(int argc, char* argv[])

{

	char buf[10];
	strncpy(buf, argv[1], sizeof(buf));
	buf[9]= '\0'; //strncpy doesn't NULL terminates

	return 0;
}
```

Unsafe format string

```
int main(int argc, char* argv[])

{

	printf(argv[1]); // If argv[1] contains a format token, such as %s,%x or %d, will cause
an access violation
	return 0;
}
```

Safe format string

```
int main(int argc, char* argv[])

{

	printf("%s", argv[1]); // Second parameter is not a formattable string

	return 0;
}
```

Double Free

Weakness ID: 415 *(Weakness Variant)* **Status:** Draft

Description

Description Summary

The product calls free() twice on the same memory address, potentially leading to modification of unexpected memory locations.

Extended Description

When a program calls free() twice with the same argument, the program's memory management data structures become corrupted. This corruption can cause the program to crash or, in some circumstances, cause two later calls to malloc() to return the same pointer. If malloc() returns the same value twice and the program later gives the attacker control over the data that is written into this doubly-allocated memory, the program becomes vulnerable to a buffer overflow attack.

Alternate Terms

Double-free

Time of Introduction

- Architecture and Design
- Implementation

Applicable Platforms

Languages

C

C++

Common Consequences

Scope	Effect
Access Control	Doubly freeing memory may result in a write-what-where condition, allowing an attacker to execute arbitrary code.

Likelihood of Exploit

Low to Medium

Demonstrative Examples

Example 1

The following code shows a simple example of a double free vulnerability.

(Bad Code)

Example Language: **C**

```
char* ptr = (char*)malloc (SIZE);
...
if (abrt) {
free(ptr);
}
...
free(ptr);
```

Double free vulnerabilities have two common (and sometimes overlapping) causes:

- Error conditions and other exceptional circumstances
- Confusion over which part of the program is responsible for freeing the memory

Although some double free vulnerabilities are not much more complicated than the previous example, most are spread out across hundreds of lines of code or even different files. Programmers seem particularly susceptible to freeing global variables

more than once.

Example 2

While contrived, this code should be exploitable on Linux distributions which do not ship with heap-chunk check summing turned on.

(Bad Code)

Example Language: **C**

```
#include <stdio.h>
#include <unistd.h>
#define BUFSIZE1 512
#define BUFSIZE2 ((BUFSIZE1/2) - 8)

int main(int argc, char **argv) {
char *buf1R1;
char *buf2R1;
char *buf1R2;
buf1R1 = (char *) malloc(BUFSIZE2);
buf2R1 = (char *) malloc(BUFSIZE2);
free(buf1R1);
free(buf2R1);
buf1R2 = (char *) malloc(BUFSIZE1);
strncpy(buf1R2, argv[1], BUFSIZE1-1);
free(buf2R1);
free(buf1R2);
}
```

Observed Examples

Reference	Description
CVE-2004-0642	Double free resultant from certain error conditions.
CVE-2004-0772	Double free resultant from certain error conditions.
CVE-2005-1689	Double free resultant from certain error conditions.
CVE-2003-0545	Double free from invalid ASN.1 encoding.
CVE-2003-1048	Double free from malformed GIF.
CVE-2005-0891	Double free from malformed GIF.
CVE-2002-0059	Double free from malformed compressed data.

Potential Mitigations

Phase: Architecture and Design

Choose a language that provides automatic memory management.

Phase: Implementation

Ensure that each allocation is freed only once. After freeing a chunk, set the pointer to NULL to ensure the pointer cannot be freed again. In complicated error conditions, be sure that clean-up routines respect the state of allocation properly. If the language is object oriented, ensure that object destructors delete each chunk of memory only once.

Phase: Implementation

Use a static analysis tool to find double free instances.

Relationships

Nature	Type	ID	Name	View(s) this relationship pertains to
ChildOf	Weakness Class	398	Indicator of Poor Code Quality	**Seven Pernicious Kingdoms (primary)700**
ChildOf	Category	399	Resource Management Errors	**Development Concepts (primary)699**
ChildOf	Category	633	Weaknesses that Affect Memory	**Resource-specific Weaknesses (primary)631**
ChildOf	Weakness Base	666	Operation on Resource in Wrong Phase of	**Research Concepts (primary)1000**

			Lifetime	
ChildOf	Weakness Class	675	Duplicate Operations on Resource	Research Concepts1000
ChildOf	Category	742	CERT C Secure Coding Section 08 - Memory Management (MEM)	**Weaknesses Addressed by the CERT C Secure Coding Standard (primary)734**
PeerOf	Weakness Base	123	Write-what-where Condition	Research Concepts1000
PeerOf	Weakness Base	416	Use After Free	Development Concepts699 Research Concepts1000
MemberOf	View	630	Weaknesses Examined by SAMATE	**Weaknesses Examined by SAMATE (primary)630**
PeerOf	Weakness Base	364	Signal Handler Race Condition	Research Concepts1000

Relationship Notes

This is usually resultant from another weakness, such as an unhandled error or race condition between threads. It could also be primary to weaknesses such as buffer overflows.

Affected Resources

- Memory

Taxonomy Mappings

Mapped Taxonomy Name	Node ID	Fit	Mapped Node Name
PLOVER			DFREE - Double-Free Vulnerability
7 Pernicious Kingdoms			Double Free
CLASP			Doubly freeing memory
CERT C Secure Coding	MEM00-C		Allocate and free memory in the same module, at the same level of abstraction
CERT C Secure Coding	MEM01-C		Store a new value in pointers immediately after free()
CERT C Secure Coding	MEM31-C		Free dynamically allocated memory exactly once

White Box Definitions

A weakness where code path has:

1. start statement that relinquishes a dynamically allocated memory resource
2. end statement that relinquishes the dynamically allocated memory resource

Maintenance Notes

It could be argued that Double Free would be most appropriately located as a child of "Use after Free", but "Use" and "Release" are considered to be distinct operations within vulnerability theory, therefore this is more accurately "Release of a Resource after Expiration or Release", which doesn't exist yet.

Content History

Submissions			
Submission Date	**Submitter**	**Organization**	**Source**
	PLOVER		Externally Mined
Modifications			
Modification Date	**Modifier**	**Organization**	**Source**
2008-07-01	Eric Dalci	Cigital	External
	updated Potential Mitigations, Time of Introduction		
2008-08-01		KDM Analytics	External
	added/updated white box definitions		
2008-09-08	CWE Content Team	MITRE	Internal
	updated Applicable Platforms, Common Consequences, Description, Maintenance Notes, Relationships, Other Notes, Relationship Notes, Taxonomy Mappings		
2008-11-24	CWE Content Team	MITRE	Internal

	updated Relationships, Taxonomy Mappings		
2009-05-27	CWE Content Team	MITRE	Internal
	updated Demonstrative Examples		
2009-10-29	CWE Content Team	MITRE	Internal
	updated Other Notes		

BACK TO TOP

Failure to Release Memory Before Removing Last Reference ('Memory Leak')

Weakness ID: 401 *(Weakness Base)* **Status:** Draft

Description

Description Summary

The software does not sufficiently track and release allocated memory after it has been used, which slowly consumes remaining memory.

Extended Description

This is often triggered by improper handling of malformed data or unexpectedly interrupted sessions.

Terminology Notes

"memory leak" has sometimes been used to describe other kinds of issues, e.g. for information leaks in which the contents of memory are inadvertently leaked (CVE-2003-0400 is one such example of this terminology conflict).

Time of Introduction

- Architecture and Design
- Implementation

Applicable Platforms

Languages

C

C++

Modes of Introduction

Memory leaks have two common and sometimes overlapping causes:

- Error conditions and other exceptional circumstances
- Confusion over which part of the program is responsible for freeing the memory

Common Consequences

Scope	Effect
Availability	Most memory leaks result in general software reliability problems, but if an attacker can intentionally trigger a memory leak, the attacker might be able to launch a denial of service attack (by crashing or hanging the program) or take advantage of other unexpected program behavior resulting from a low memory condition.

Likelihood of Exploit

Medium

Demonstrative Examples

Example 1

The following C function leaks a block of allocated memory if the call to read() fails to return the expected number of bytes:

(Bad Code)

Example Language: **C**

```
char* getBlock(int fd) {
char* buf = (char*) malloc(BLOCK_SIZE);
if (!buf) {
return NULL;
}
if (read(fd, buf, BLOCK_SIZE) != BLOCK_SIZE) {

return NULL;
}
```

```
return buf;
}
```

Example 2

Here the problem is that every time a connection is made, more memory is allocated. So if one just opened up more and more connections, eventually the machine would run out of memory.

(Bad Code)

Example Language: **C**

```
bar connection(){
foo = malloc(1024);
return foo;
}
endConnection(bar foo) {

free(foo);
}
int main() {

while(1) //thread 1
//On a connection
foo=connection(); //thread 2
//When the connection ends
endConnection(foo)
}
```

Observed Examples

Reference	Description
CVE-2005-3119	Memory leak because function does not free() an element of a data structure.
CVE-2004-0427	Memory leak when counter variable is not decremented.
CVE-2002-0574	Memory leak when counter variable is not decremented.
CVE-2005-3181	Kernel uses wrong function to release a data structure, preventing data from being properly tracked by other code.
CVE-2004-0222	Memory leak via unknown manipulations as part of protocol test suite.
CVE-2001-0136	Memory leak via a series of the same command.

Potential Mitigations

Pre-design: Use a language or compiler that performs automatic bounds checking.

Phase: Architecture and Design

Use an abstraction library to abstract away risky APIs. Not a complete solution.

Pre-design through Build: The Boehm-Demers-Weiser Garbage Collector or valgrind can be used to detect leaks in code. This is not a complete solution as it is not 100% effective.

Relationships

Nature	Type	ID	Name	View(s) this relationship pertains to
ChildOf	Weakness Class	398	Indicator of Poor Code Quality	**Seven Pernicious Kingdoms (primary)700**
ChildOf	Category	399	Resource Management Errors	**Development Concepts (primary)699**
ChildOf	Category	633	Weaknesses that Affect Memory	**Resource-specific Weaknesses (primary)631**
ChildOf	Category	730	OWASP Top Ten 2004 Category A9 - Denial of Service	**Weaknesses in OWASP Top Ten (2004) (primary)711**
ChildOf	Weakness Base	772	Missing Release of Resource after Effective	**Research Concepts (primary)1000**

			Lifetime	
MemberOf	View	630	Weaknesses Examined by SAMATE	**Weaknesses Examined by SAMATE (primary)630**
CanFollow	Weakness Class	390	Detection of Error Condition Without Action	Research Concepts1000

Relationship Notes

This is often a resultant weakness due to improper handling of malformed data or early termination of sessions.

Affected Resources

- Memory

Functional Areas

- Memory management

Taxonomy Mappings

Mapped Taxonomy Name	Node ID	Fit	Mapped Node Name
PLOVER			Memory leak
7 Pernicious Kingdoms			Memory Leak
CLASP			Failure to deallocate data
OWASP Top Ten 2004	A9	CWE More Specific	Denial of Service

White Box Definitions

A weakness where the code path has:

1. start statement that allocates dynamically allocated memory resource

2. end statement that loses identity of the dynamically allocated memory resource creating situation where dynamically allocated memory resource is never relinquished

Where "loses" is defined through the following scenarios:

1. identity of the dynamic allocated memory resource never obtained

2. the statement assigns another value to the data element that stored the identity of the dynamically allocated memory resource and there are no aliases of that data element

3. identity of the dynamic allocated memory resource obtained but never passed on to function for memory resource release

4. the data element that stored the identity of the dynamically allocated resource has reached the end of its scope at the statement and there are no aliases of that data element

References

J. Whittaker and H. Thompson. "How to Break Software Security". Addison Wesley. 2003.

Content History

Submissions			
Submission Date	**Submitter**	**Organization**	**Source**
	PLOVER		Externally Mined
Modifications			
Modification Date	**Modifier**	**Organization**	**Source**
2008-07-01	Eric Dalci	Cigital	External
	updated Time of Introduction		
2008-08-01		KDM Analytics	External
	added/updated white box definitions		
2008-08-15		Veracode	External
	Suggested OWASP Top Ten 2004 mapping		
2008-09-08	CWE Content Team	MITRE	Internal
	updated Applicable Platforms, Common Consequences, Relationships, Other Notes, References, Relationship Notes, Taxonomy Mappings, Terminology Notes		
2008-10-14	CWE Content Team	MITRE	Internal
	updated Description		
2009-03-10	CWE Content Team	MITRE	Internal
	updated Other Notes		
2009-05-27	CWE Content Team	MITRE	Internal
	updated Name		
2009-07-17	KDM Analytics		External
	Improved the White Box Definition		

2009-07-27	CWE Content Team	MITRE	Internal
	updated White Box Definitions		
2009-10-29	CWE Content Team	MITRE	Internal
	updated Modes of Introduction, Other Notes		
2010-02-16	CWE Content Team	MITRE	Internal
	updated Relationships		

Previous Entry Names

Change Date	Previous Entry Name
2008-04-11	Memory Leak
2009-05-27	Failure to Release Memory Before Removing Last Reference (aka 'Memory Leak')

BACK TO TOP

Use of Uninitialized Variable

Weakness ID: 457 *(Weakness Variant)* **Status:** Draft

Description

Description Summary

The code uses a variable that has not been initialized, leading to unpredictable or unintended results.

Extended Description

In some languages, such as C, an uninitialized variable contains contents of previously-used memory. An attacker can sometimes control or read these contents.

Time of Introduction

- Implementation

Applicable Platforms

Languages

C: *(Sometimes)*

C++: *(Sometimes)*

Perl: *(Often)*

All

Common Consequences

Scope	Effect
Availability Integrity	Initial variables usually contain junk, which can not be trusted for consistency. This can lead to denial of service conditions, or modify control flow in unexpected ways. In some cases, an attacker can "pre-initialize" the variable using previous actions, which might enable code execution. This can cause a race condition if a lock variable check passes when it should not.
Authorization	Strings that are not initialized are especially dangerous, since many functions expect a null at the end -- and only at the end -- of a string.

Likelihood of Exploit

High

Demonstrative Examples

Example 1

The following switch statement is intended to set the values of the variables aN and bN, but in the default case, the programmer has accidentally set the value of aN twice. As a result, bN will have an undefined value.

(Bad Code)

Example Language: **C**

```
switch (ctl) {
case -1:
aN = 0;
bN = 0;
break;
case 0:
aN = i;
bN = -i;
break;
case 1:
aN = i + NEXT_SZ;
bN = i - NEXT_SZ;
break;
default:
```

```
aN = -1;
aN = -1;
break;
}
repaint(aN, bN);
```

Most uninitialized variable issues result in general software reliability problems, but if attackers can intentionally trigger the use of an uninitialized variable, they might be able to launch a denial of service attack by crashing the program. Under the right circumstances, an attacker may be able to control the value of an uninitialized variable by affecting the values on the stack prior to the invocation of the function.

Example 2

Example Languages: **C++ and Java**

```
int foo;
void bar() {
if (foo==0)
/.../
/../
}
```

Observed Examples

Reference	Description
CVE-2008-0081	Uninitialized variable leads to code execution in popular desktop application.
CVE-2007-4682	Crafted input triggers dereference of an uninitialized object pointer.
CVE-2007-3468	Crafted audio file triggers crash when an uninitialized variable is used.
CVE-2007-2728	Uninitialized random seed variable used.

Potential Mitigations

Phase: Implementation

Assign all variables to an initial value.

Phase: Build and Compilation

Most compilers will complain about the use of uninitialized variables if warnings are turned on.

Phase: Requirements

The choice could be made to use a language that is not susceptible to these issues.

Phase: Architecture and Design

Mitigating technologies such as safe string libraries and container abstractions could be introduced.

Other Notes

Before variables are initialized, they generally contain junk data of what was left in the memory that the variable takes up. This data is very rarely useful, and it is generally advised to pre-initialize variables or set them to their first values early. If one forgets -- in the C language -- to initialize, for example a char *, many of the simple string libraries may often return incorrect results as they expect the null termination to be at the end of a string.

Stack variables in C and C++ are not initialized by default. Their initial values are determined by whatever happens to be in their location on the stack at the time the function is invoked. Programs should never use the value of an uninitialized variable. It is not uncommon for programmers to use an uninitialized variable in code that handles errors or other rare and exceptional circumstances. Uninitialized variable warnings can sometimes indicate the presence of a typographic error in the code.

Relationships

Nature	Type	ID	Name	View(s) this relationship pertains to
ChildOf	Weakness Class	398	Indicator of Poor Code Quality	**Seven Pernicious Kingdoms (primary)700**
ChildOf	Weakness Base	456	Missing Initialization	**Development Concepts (primary)699 Research Concepts**

				(primary)1000
MemberOf	View	630	Weaknesses Examined by SAMATE	**Weaknesses Examined by SAMATE (primary)630**

Taxonomy Mappings

Mapped Taxonomy Name	Node ID	Fit	Mapped Node Name
CLASP			Uninitialized variable
7 Pernicious Kingdoms			Uninitialized Variable

White Box Definitions

A weakness where the code path has:

1. start statement that defines variable
2. end statement that accesses the variable
3. the code path does not contain a statement that assigns value to the variable

References

mercy. "Exploiting Uninitialized Data". Jan 2006. < http://www.felinemenace.org/~mercy/papers/UBehavior/UBehavior.zip>.

Microsoft Security Vulnerability Research & Defense. "MS08-014 : The Case of the Uninitialized Stack Variable Vulnerability". 2008-03-11. <http://blogs.technet.com/swi/archive/2008/03/11/the-case-of-the-uninitialized-stack-variable-vulnerability.aspx>.

Content History

Submissions

Submission Date	Submitter	Organization	Source
	CLASP		Externally Mined

Modifications

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2008-07-01	Eric Dalci	Cigital	External
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2008-09-08	CWE Content Team	MITRE	Internal
	updated Applicable Platforms, Common Consequences, Description, Relationships, Observed Example, Other Notes, References, Taxonomy Mappings		
2009-01-12	CWE Content Team	MITRE	Internal
	updated Common Consequences, Demonstrative Examples, Potential Mitigations		
2009-03-10	CWE Content Team	MITRE	Internal
	updated Demonstrative Examples		
2009-05-27	CWE Content Team	MITRE	Internal
	updated Demonstrative Examples		

Previous Entry Names

Change Date	Previous Entry Name
2008-04-11	Uninitialized Variable

BACK TO TOP

Use of Zero Initialized Pointer

Risk

What might happen

A null pointer dereference is likely to cause a run-time exception, a crash, or other unexpected behavior.

Cause

How does it happen

Variables which are declared without being assigned will implicitly retain a null value until they are assigned. The null value can also be explicitly set to a variable, to ensure clear out its contents. Since null is not really a value, it may not have object variables and methods, and any attempt to access contents of a null object, instead of verifying it is set beforehand, will result in a null pointer dereference exception.

General Recommendations

How to avoid it

- For any variable that is created, ensure all logic flows between declaration and use assign a non-null value to the variable first.
- Enforce null checks on any received variable or object before it is dereferenced, to ensure it does not contain a null assigned to it elsewhere.
- Consider the need to assign null values in order to overwrite initialized variables. Consider reassigning or releasing these variables instead.

Source Code Examples

CPP

Explicit NULL Dereference

```
char * input = NULL;
printf("%s", input);
```

Implicit NULL Dereference

```
char * input;
printf("%s", input);
```

Java

Explicit Null Dereference

```
Object o = null;
out.println(o.getClass());
```

Stored Buffer Overflow boundcpy

Risk

What might happen

Buffer overflow attacks, in their various forms, could allow an attacker to control certain areas of memory. Typically, this is used to overwrite data on the stack necessary for the program to function properly, such as code and memory addresses, though other forms of this attack exist. Exploiting this vulnerability can generally lead to system crashes, infinite loops, or even execution of arbitrary code.

Cause

How does it happen

Buffer Overflows can manifest in numerous different variations. In it's most basic form, the attack controls a buffer, which is then copied to a smaller buffer without size verification. Because the attacker's source buffer is larger than the program's target buffer, the attacker's data overwrites whatever is next on the stack, allowing the attacker to control program structures.
Alternatively, the vulnerability could be the result of improper bounds checking; exposing internal memory addresses outside of their valid scope; allowing the attacker to control the size of the target buffer; or various other forms.

General Recommendations

How to avoid it

- Always perform proper bounds checking before copying buffers or strings.
- Prefer to use safer functions and structures, e.g. safe string classes over `char*`, `strncpy` over `strcpy`, and so on.
- Consistently apply tests for the size of buffers.
- Do not return variable addresses outside the scope of their variables.

Source Code Examples

CPP

Overflowing Buffers

```
const int BUFFER_SIZE = 10;
char buffer[BUFFER_SIZE];

void copyStringToBuffer(char* inputString)
{
    strcpy(buffer, inputString);
}
```

Checked Buffers

```
const int BUFFER_SIZE = 10;
const int MAX_INPUT_SIZE = 256;
char buffer[BUFFER_SIZE];

void copyStringToBuffer(char* inputString)
```

```
{
    if (strnlen(inputString, MAX_INPUT_SIZE) < sizeof(buffer))
    {
        strncpy(buffer, inputString, sizeof(buffer));
    }
}
```

Use of Insufficiently Random Values

Risk

What might happen

Random values are often used as a mechanism to prevent malicious users from guessing a value, such as a password, encryption key, or session identifier. Depending on what this random value is used for, an attacker would be able to predict the next numbers generated, or previously generated values. This could enable the attacker to hijack another user's session, impersonate another user, or crack an encryption key (depending on what the pseudo-random value was used for).

Cause

How does it happen

The application uses a weak method of generating pseudo-random values, such that other numbers could be determined from a relatively small sample size. Since the pseudo-random number generator used is designed for statistically uniform distribution of values, it is approximately deterministic. Thus, after collecting a few generated values (e.g. by creating a few individual sessions, and collecting the sessionids), it would be possible for an attacker to calculate another sessionid.
Specifically, if this pseudo-random value is used in any security context, such as passwords, keys, or secret identifiers, an attacker would be able to predict the next numbers generated, or previously generated values.

General Recommendations

How to avoid it

Generic Guidance:

- Whenever unpredicatable numbers are required in a security context, use a cryptographically strong random number generator, instead of a statistical pseudo-random generator.
- Use the cryptorandom generator that is built-in to your language or platform, and ensure it is securely seeded. Do not seed the generator with a weak, non-random seed. (In most cases, the default is securely random).
- Ensure you use a long enough random value, to make brute-force attacks unfeasible.

Specific Recommendations:

- Do not use the statistical pseudo-random number generator, use the cryptorandom generator instead. In Java, this is the SecureRandom class.

Source Code Examples

Java

Use of a weak pseudo-random number generator

```
Random random = new Random();

long sessNum = random.nextLong();

String sessionId = sessNum.toString();
```

```
```

Cryptographically secure random number generator

```
SecureRandom random = new SecureRandom();

byte sessBytes[] = new byte[32];

random.nextBytes(sessBytes);

String sessionId = new String(sessBytes);
```

Objc

Use of a weak pseudo-random number generator

```
long sessNum = rand();
NSString* sessionId = [NSString stringWithFormat:@"%ld", sessNum];
```

Cryptographically secure random number generator

```
UInt32 sessBytes;
SecRandomCopyBytes(kSecRandomDefault, sizeof(sessBytes), (uint8_t*)&sessBytes);

NSString* sessionId = [NSString stringWithFormat:@"%llu", sessBytes];
```

Swift

Use of a weak pseudo-random number generator

```
let sessNum = rand();
let sessionId = String(format:"%ld", sessNum)
```

Cryptographically secure random number generator

```
var sessBytes: UInt32 = 0
withUnsafeMutablePointer(&sessBytes, { (sessBytesPointer) -> Void in
    let castedPointer = unsafeBitCast(sessBytesPointer, UnsafeMutablePointer<UInt8>.self)
    SecRandomCopyBytes(kSecRandomDefault, sizeof(UInt32), castedPointer)
})

let sessionId = String(format:"%llu", sessBytes)
```

Unchecked Return Value

Risk

What might happen

A program that does not check function return values could cause the application to enter an undefined state. This could lead to unexpected behavior and unintended consequences, including inconsistent data, system crashes or other error-based exploits.

Cause

How does it happen

The application calls a system function, but does not receive or check the result of this funciton. These functions often return error codes in the result, or share other status codes with it's caller. The application simply ignores this result value, losing this vital information.

General Recommendations

How to avoid it

- Always check the result of any called function that returns a value, and verify the result is an expected value.

- Ensure the calling function responds to all possible return values.

- Expect runtime errors and handle them gracefully. Explicitly define a mechanism for handling unexpected errors.

Source Code Examples

CPP

Unchecked Memory Allocation

```
buff = (char*) malloc(size);
strncpy(buff, source, size);
```

Safer Memory Allocation

```
buff = (char*) malloc(size+1);
if (buff==NULL) exit(1);

strncpy(buff, source, size);
buff[size] = '\0';
```

Use of sizeof() on a Pointer Type

Weakness ID: 467 *(Weakness Variant)* **Status:** Draft

Description

Description Summary

The code calls sizeof() on a malloced pointer type, which always returns the wordsize/8. This can produce an unexpected result if the programmer intended to determine how much memory has been allocated.

Time of Introduction

- Implementation

Applicable Platforms

Languages

C

C++

Common Consequences

Scope	Effect
Integrity	This error can often cause one to allocate a buffer that is much smaller than what is needed, leading to resultant weaknesses such as buffer overflows.

Likelihood of Exploit

High

Demonstrative Examples

Example 1

Care should be taken to ensure sizeof returns the size of the data structure itself, and not the size of the pointer to the data structure.

In this example, sizeof(foo) returns the size of the pointer.

(Bad Code)

Example Languages: **C and C++**

```
double *foo;
...
foo = (double *)malloc(sizeof(foo));
```

In this example, sizeof(*foo) returns the size of the data structure and not the size of the pointer.

(Good Code)

Example Languages: **C and C++**

```
double *foo;
...
foo = (double *)malloc(sizeof(*foo));
```

Example 2

This example defines a fixed username and password. The AuthenticateUser() function is intended to accept a username and a password from an untrusted user, and check to ensure that it matches the username and password. If the username and password match, AuthenticateUser() is intended to indicate that authentication succeeded.

(Bad Code)

```
/* Ignore CWE-259 (hard-coded password) and CWE-309 (use of password system for authentication) for this example. */

char *username = "admin";
char *pass = "password";

int AuthenticateUser(char *inUser, char *inPass) {
```

```
printf("Sizeof username = %d\n", sizeof(username));
printf("Sizeof pass = %d\n", sizeof(pass));

if (strncmp(username, inUser, sizeof(username))) {
printf("Auth failure of username using sizeof\n");
return(AUTH_FAIL);
}
/* Because of CWE-467, the sizeof returns 4 on many platforms and architectures. */
if (! strncmp(pass, inPass, sizeof(pass))) {
printf("Auth success of password using sizeof\n");
return(AUTH_SUCCESS);
}
else {
printf("Auth fail of password using sizeof\n");
return(AUTH_FAIL);
}
}

int main (int argc, char **argv)
{
int authResult;

if (argc < 3) {
ExitError("Usage: Provide a username and password");
}
authResult = AuthenticateUser(argv[1], argv[2]);
if (authResult != AUTH_SUCCESS) {
ExitError("Authentication failed");
}
else {
DoAuthenticatedTask(argv[1]);
}
}
```

In AuthenticateUser(), because sizeof() is applied to a parameter with an array type, the sizeof() call might return 4 on many modern architectures. As a result, the strncmp() call only checks the first four characters of the input password, resulting in a partial comparison (CWE-187), leading to improper authentication (CWE-287).

Because of the partial comparison, any of these passwords would still cause authentication to succeed for the "admin" user:

(Attack)

```
pass5
passABCDEFGH
passWORD
```

Because only 4 characters are checked, this significantly reduces the search space for an attacker, making brute force attacks more feasible.

The same problem also applies to the username, so values such as "adminXYZ" and "administrator" will succeed for the username.

Potential Mitigations

Phase: Implementation

Use expressions such as "sizeof(*pointer)" instead of "sizeof(pointer)", unless you intend to run sizeof() on a pointer type to gain some platform independence or if you are allocating a variable on the stack.

Other Notes

The use of sizeof() on a pointer can sometimes generate useful information. An obvious case is to find out the wordsize on a platform. More often than not, the appearance of sizeof(pointer) indicates a bug.

Weakness Ordinalities

Ordinality	Description
Primary	*(where the weakness exists independent of other weaknesses)*

Relationships

Nature	Type	ID	Name	View(s) this relationship pertains to
ChildOf	Category	465	Pointer Issues	**Development Concepts (primary)699**
ChildOf	Weakness Class	682	Incorrect Calculation	**Research Concepts (primary)1000**
ChildOf	Category	737	CERT C Secure Coding Section 03 - Expressions (EXP)	**Weaknesses Addressed by the CERT C Secure Coding Standard (primary)734**
ChildOf	Category	740	CERT C Secure Coding Section 06 - Arrays (ARR)	Weaknesses Addressed by the CERT C Secure Coding Standard734
CanPrecede	Weakness Base	131	Incorrect Calculation of Buffer Size	Research Concepts1000

Taxonomy Mappings

Mapped Taxonomy Name	Node ID	Fit	Mapped Node Name
CLASP			Use of sizeof() on a pointer type
CERT C Secure Coding	ARR01-C		Do not apply the sizeof operator to a pointer when taking the size of an array
CERT C Secure Coding	EXP01-C		Do not take the size of a pointer to determine the size of the pointed-to type

White Box Definitions

A weakness where code path has:

1. end statement that passes an identity of a dynamically allocated memory resource to a sizeof operator
2. start statement that allocates the dynamically allocated memory resource

References

Robert Seacord. "EXP01-A. Do not take the sizeof a pointer to determine the size of a type". <https://www.securecoding.cert.org/confluence/display/seccode/EXP01-A.+Do+not+take+the+sizeof+a+pointer+to+determine+the+size+of+a+type>.

Content History

Submissions

Submission Date	Submitter	Organization	Source
	CLASP		Externally Mined

Modifications

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2008-07-01	Eric Dalci	Cigital	External
	updated Time of Introduction		
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	added/updated white box definitions		
2008-09-08	CWE Content Team	MITRE	Internal
	updated Applicable Platforms, Common Consequences, Relationships, Other Notes, Taxonomy Mappings, Weakness Ordinalities		
2008-11-24	CWE Content Team	MITRE	Internal
	updated Relationships, Taxonomy Mappings		
2009-03-10	CWE Content Team	MITRE	Internal
	updated Demonstrative Examples		
2009-12-28	CWE Content Team	MITRE	Internal
	updated Demonstrative Examples		
2010-02-16	CWE Content Team	MITRE	Internal
	updated Relationships		

BACK TO TOP

NULL Pointer Dereference

Risk

What might happen

A null pointer dereference is likely to cause a run-time exception, a crash, or other unexpected behavior.

Cause

How does it happen

Variables which are declared without being assigned will implicitly retain a null value until they are assigned. The null value can also be explicitly set to a variable, to ensure clear out its contents. Since null is not really a value, it may not have object variables and methods, and any attempt to access contents of a null object, instead of verifying it is set beforehand, will result in a null pointer dereference exception.

General Recommendations

How to avoid it

- For any variable that is created, ensure all logic flows between declaration and use assign a non-null value to the variable first.
- Enforce null checks on any received variable or object before it is dereferenced, to ensure it does not contain a null assigned to it elsewhere.
- Consider the need to assign null values in order to overwrite initialized variables. Consider reassigning or releasing these variables instead.

Source Code Examples

Heuristic 2nd Order Buffer Overflow read

Risk

What might happen

Buffer overflow attacks, in their various forms, could allow an attacker to control certain areas of memory. Typically, this is used to overwrite data on the stack necessary for the program to function properly, such as code and memory addresses, though other forms of this attack exist. Exploiting this vulnerability can generally lead to system crashes, infinite loops, or even execution of arbitrary code.

Cause

How does it happen

Buffer Overflows can manifest in numerous different variations. In it's most basic form, the attack controls a buffer, which is then copied to a smaller buffer without size verification. Because the attacker's source buffer is larger than the program's target buffer, the attacker's data overwrites whatever is next on the stack, allowing the attacker to control program structures.
Alternatively, the vulnerability could be the result of improper bounds checking; exposing internal memory addresses outside of their valid scope; allowing the attacker to control the size of the target buffer; or various other forms.

General Recommendations

How to avoid it

- Always perform proper bounds checking before copying buffers or strings.
- Prefer to use safer functions and structures, e.g. safe string classes over `char*`, `strncpy` over `strcpy`, and so on.
- Consistently apply tests for the size of buffers.
- Do not return variable addresses outside the scope of their variables.

Source Code Examples

Heuristic Buffer Overflow malloc

Risk

What might happen

Buffer overflow attacks, in their various forms, could allow an attacker to control certain areas of memory. Typically, this is used to overwrite data on the stack necessary for the program to function properly, such as code and memory addresses, though other forms of this attack exist. Exploiting this vulnerability can generally lead to system crashes, infinite loops, or even execution of arbitrary code.

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Buffer Overflows can manifest in numerous different variations. In it's most basic form, the attack controls a buffer, which is then copied to a smaller buffer without size verification. Because the attacker's source buffer is larger than the program's target buffer, the attacker's data overwrites whatever is next on the stack, allowing the attacker to control program structures.
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How to avoid it

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- Prefer to use safer functions and structures, e.g. safe string classes over `char*`, `strncpy` over `strcpy`, and so on.
- Consistently apply tests for the size of buffers.
- Do not return variable addresses outside the scope of their variables.

Source Code Examples

Use of sizeof() on a Pointer Type

Weakness ID: 467 *(Weakness Variant)* **Status:** Draft

Description

Description Summary

The code calls sizeof() on a malloced pointer type, which always returns the wordsize/8. This can produce an unexpected result if the programmer intended to determine how much memory has been allocated.

Time of Introduction

- Implementation

Applicable Platforms

Languages

C

C++

Common Consequences

Scope	Effect
Integrity	This error can often cause one to allocate a buffer that is much smaller than what is needed, leading to resultant weaknesses such as buffer overflows.

Likelihood of Exploit

High

Demonstrative Examples

Example 1

Care should be taken to ensure sizeof returns the size of the data structure itself, and not the size of the pointer to the data structure.

In this example, sizeof(foo) returns the size of the pointer.

(Bad Code)

Example Languages: **C and C++**

```
double *foo;
...
foo = (double *)malloc(sizeof(foo));
```

In this example, sizeof(*foo) returns the size of the data structure and not the size of the pointer.

(Good Code)

Example Languages: **C and C++**

```
double *foo;
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Example 2

This example defines a fixed username and password. The AuthenticateUser() function is intended to accept a username and a password from an untrusted user, and check to ensure that it matches the username and password. If the username and password match, AuthenticateUser() is intended to indicate that authentication succeeded.

(Bad Code)

```
/* Ignore CWE-259 (hard-coded password) and CWE-309 (use of password system for authentication) for this example. */

char *username = "admin";
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int AuthenticateUser(char *inUser, char *inPass) {
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```
printf("Sizeof username = %d\n", sizeof(username));
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if (strncmp(username, inUser, sizeof(username))) {
printf("Auth failure of username using sizeof\n");
return(AUTH_FAIL);
}
/* Because of CWE-467, the sizeof returns 4 on many platforms and architectures. */
if (! strncmp(pass, inPass, sizeof(pass))) {
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}
else {
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}
}

int main (int argc, char **argv)
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int authResult;

if (argc < 3) {
ExitError("Usage: Provide a username and password");
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authResult = AuthenticateUser(argv[1], argv[2]);
if (authResult != AUTH_SUCCESS) {
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else {
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}
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In AuthenticateUser(), because sizeof() is applied to a parameter with an array type, the sizeof() call might return 4 on many modern architectures. As a result, the strncmp() call only checks the first four characters of the input password, resulting in a partial comparison (CWE-187), leading to improper authentication (CWE-287).

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Because only 4 characters are checked, this significantly reduces the search space for an attacker, making brute force attacks more feasible.

The same problem also applies to the username, so values such as "adminXYZ" and "administrator" will succeed for the username.

Potential Mitigations

Phase: Implementation

Use expressions such as "sizeof(*pointer)" instead of "sizeof(pointer)", unless you intend to run sizeof() on a pointer type to gain some platform independence or if you are allocating a variable on the stack.

Other Notes

The use of sizeof() on a pointer can sometimes generate useful information. An obvious case is to find out the wordsize on a platform. More often than not, the appearance of sizeof(pointer) indicates a bug.

Weakness Ordinalities

Ordinality	Description
Primary	*(where the weakness exists independent of other weaknesses)*

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ChildOf	Category	740	CERT C Secure Coding Section 06 - Arrays (ARR)	Weaknesses Addressed by the CERT C Secure Coding Standard734
CanPrecede	Weakness Base	131	Incorrect Calculation of Buffer Size	Research Concepts1000

Taxonomy Mappings

Mapped Taxonomy Name	Node ID	Fit	Mapped Node Name
CLASP			Use of sizeof() on a pointer type
CERT C Secure Coding	ARR01-C		Do not apply the sizeof operator to a pointer when taking the size of an array
CERT C Secure Coding	EXP01-C		Do not take the size of a pointer to determine the size of the pointed-to type

White Box Definitions

A weakness where code path has:

1. end statement that passes an identity of a dynamically allocated memory resource to a sizeof operator
2. start statement that allocates the dynamically allocated memory resource

References

Robert Seacord. "EXP01-A. Do not take the sizeof a pointer to determine the size of a type". <https://www.securecoding.cert.org/confluence/display/seccode/EXP01-A.+Do+not+take+the+sizeof+a+pointer+to+determine+the+size+of+a+type>.

Content History

Submissions			
Submission Date	**Submitter**	**Organization**	**Source**
	CLASP		Externally Mined
Modifications			
Modification Date	**Modifier**	**Organization**	**Source**
2008-07-01	Eric Dalci	Cigital	External
	updated Time of Introduction		
2008-08-01		KDM Analytics	External
	added/updated white box definitions		
2008-09-08	CWE Content Team	MITRE	Internal
	updated Applicable Platforms, Common Consequences, Relationships, Other Notes, Taxonomy Mappings, Weakness Ordinalities		
2008-11-24	CWE Content Team	MITRE	Internal
	updated Relationships, Taxonomy Mappings		
2009-03-10	CWE Content Team	MITRE	Internal
	updated Demonstrative Examples		
2009-12-28	CWE Content Team	MITRE	Internal
	updated Demonstrative Examples		
2010-02-16	CWE Content Team	MITRE	Internal
	updated Relationships		

BACK TO TOP

Improper Validation of Array Index

Weakness ID: 129 *(Weakness Base)* **Status:** Draft

Description

Description Summary

The product uses untrusted input when calculating or using an array index, but the product does not validate or incorrectly validates the index to ensure the index references a valid position within the array.

Alternate Terms

out-of-bounds array index

index-out-of-range

array index underflow

Time of Introduction

- Implementation

Applicable Platforms

Languages

C: *(Often)*

C++: *(Often)*

Language-independent

Common Consequences

Scope	Effect
Integrity Availability	Unchecked array indexing will very likely result in the corruption of relevant memory and perhaps instructions, leading to a crash, if the values are outside of the valid memory area.
Integrity	If the memory corrupted is data, rather than instructions, the system will continue to function with improper values.
Confidentiality Integrity	Unchecked array indexing can also trigger out-of-bounds read or write operations, or operations on the wrong objects; i.e., "buffer overflows" are not always the result. This may result in the exposure or modification of sensitive data.
Integrity	If the memory accessible by the attacker can be effectively controlled, it may be possible to execute arbitrary code, as with a standard buffer overflow and possibly without the use of large inputs if a precise index can be controlled.
Integrity Availability Confidentiality	A single fault could allow either an overflow (CWE-788) or underflow (CWE-786) of the array index. What happens next will depend on the type of operation being performed out of bounds, but can expose sensitive information, cause a system crash, or possibly lead to arbitrary code execution.

Likelihood of Exploit

High

Detection Methods

Automated Static Analysis

This weakness can often be detected using automated static analysis tools. Many modern tools use data flow analysis or constraint-based techniques to minimize the number of false positives.

Automated static analysis generally does not account for environmental considerations when reporting out-of-bounds memory operations. This can make it difficult for users to determine which warnings should be investigated first. For example, an analysis tool might report array index errors that originate from command line arguments in a program that is not expected to run with setuid or other special privileges.

Effectiveness: High

This is not a perfect solution, since 100% accuracy and coverage are not feasible.

Automated Dynamic Analysis

This weakness can be detected using dynamic tools and techniques that interact with the software using large test suites with many diverse inputs, such as fuzz testing (fuzzing), robustness testing, and fault injection. The software's operation may slow down, but it should not become unstable, crash, or generate incorrect results.

Black Box

Black box methods might not get the needed code coverage within limited time constraints, and a dynamic test might not produce any noticeable side effects even if it is successful.

Demonstrative Examples

Example 1

The following C/C++ example retrieves the sizes of messages for a pop3 mail server. The message sizes are retrieved from a socket that returns in a buffer the message number and the message size, the message number (num) and size (size) are extracted from the buffer and the message size is placed into an array using the message number for the array index.

(Bad Code)

Example Language: **C**

```
/* capture the sizes of all messages */
int getsizes(int sock, int count, int *sizes) {
...
char buf[BUFFER_SIZE];
int ok;
int num, size;

// read values from socket and added to sizes array
while ((ok = gen_recv(sock, buf, sizeof(buf))) == 0)
{

// continue read from socket until buf only contains '.'
if (DOTLINE(buf))
break;
else if (sscanf(buf, "%d %d", &num, &size) == 2)
sizes[num - 1] = size;
}
...
}
```

In this example the message number retrieved from the buffer could be a value that is outside the allowable range of indices for the array and could possibly be a negative number. Without proper validation of the value to be used for the array index an array overflow could occur and could potentially lead to unauthorized access to memory addresses and system crashes. The value of the array index should be validated to ensure that it is within the allowable range of indices for the array as in the following code.

(Good Code)

Example Language: **C**

```
/* capture the sizes of all messages */
int getsizes(int sock, int count, int *sizes) {
...
char buf[BUFFER_SIZE];
int ok;
int num, size;

// read values from socket and added to sizes array
while ((ok = gen_recv(sock, buf, sizeof(buf))) == 0)
{

// continue read from socket until buf only contains '.'
if (DOTLINE(buf))
```

```
break;
else if (sscanf(buf, "%d %d", &num, &size) == 2) {
if (num > 0 && num <= (unsigned)count)
sizes[num - 1] = size;
else
/* warn about possible attempt to induce buffer overflow */
report(stderr, "Warning: ignoring bogus data for message sizes returned by server.\n");
}
}
...
}
```

Example 2

In the code snippet below, an unchecked integer value is used to reference an object in an array.

(Bad Code)

Example Language: **Java**

```
public String getValue(int index) {
return array[index];
}
```

If index is outside of the range of the array, this may result in an ArrayIndexOutOfBounds Exception being raised.

Example 3

In the following Java example the method displayProductSummary is called from a Web service servlet to retrieve product summary information for display to the user. The servlet obtains the integer value of the product number from the user and passes it to the displayProductSummary method. The displayProductSummary method passes the integer value of the product number to the getProductSummary method which obtains the product summary from the array object containing the project summaries using the integer value of the product number as the array index.

(Bad Code)

Example Language: **Java**

```
// Method called from servlet to obtain product information
public String displayProductSummary(int index) {

String productSummary = new String("");

try {
String productSummary = getProductSummary(index);

} catch (Exception ex) {...}

return productSummary;
}

public String getProductSummary(int index) {
return products[index];
}
```

In this example the integer value used as the array index that is provided by the user may be outside the allowable range of indices for the array which may provide unexpected results or may comes the application to fail. The integer value used for the array index should be validated to ensure that it is within the allowable range of indices for the array as in the following code.

(Good Code)

Example Language: **Java**

```
// Method called from servlet to obtain product information
public String displayProductSummary(int index) {

String productSummary = new String("");
```

```
try {
String productSummary = getProductSummary(index);

} catch (Exception ex) {...}

return productSummary;
}

public String getProductSummary(int index) {
String productSummary = "";

if ((index >= 0) && (index < MAX_PRODUCTS)) {
productSummary = products[index];
}
else {
System.err.println("index is out of bounds");
throw new IndexOutOfBoundsException();
}

return productSummary;
}
```

An alternative in Java would be to use one of the collection objects such as ArrayList that will automatically generate an exception if an attempt is made to access an array index that is out of bounds.

(Good Code)

Example Language: **Java**

```
ArrayList productArray = new ArrayList(MAX_PRODUCTS);
...
try {
productSummary = (String) productArray.get(index);
} catch (IndexOutOfBoundsException ex) {...}
```

Observed Examples

Reference	Description
CVE-2005-0369	large ID in packet used as array index
CVE-2001-1009	negative array index as argument to POP LIST command
CVE-2003-0721	Integer signedness error leads to negative array index
CVE-2004-1189	product does not properly track a count and a maximum number, which can lead to resultant array index overflow.
CVE-2007-5756	chain: device driver for packet-capturing software allows access to an unintended IOCTL with resultant array index error.

Potential Mitigations

Phase: Architecture and Design

Strategies: Input Validation; Libraries or Frameworks

Use an input validation framework such as Struts or the OWASP ESAPI Validation API. If you use Struts, be mindful of weaknesses covered by the CWE-101 category.

Phase: Architecture and Design

For any security checks that are performed on the client side, ensure that these checks are duplicated on the server side, in order to avoid CWE-602. Attackers can bypass the client-side checks by modifying values after the checks have been performed, or by changing the client to remove the client-side checks entirely. Then, these modified values would be submitted to the server.

Even though client-side checks provide minimal benefits with respect to server-side security, they are still useful. First, they can support intrusion detection. If the server receives input that should have been rejected by the client, then it may be an indication of an attack. Second, client-side error-checking can provide helpful feedback to the user about the expectations for valid input. Third, there may be a reduction in server-side processing time for accidental input errors, although this is typically a small savings.

Phase: Requirements

Strategy: Language Selection

Use a language with features that can automatically mitigate or eliminate out-of-bounds indexing errors.

For example, Ada allows the programmer to constrain the values of a variable and languages such as Java and Ruby will allow the programmer to handle exceptions when an out-of-bounds index is accessed.

Phase: Implementation

Strategy: Input Validation

Assume all input is malicious. Use an "accept known good" input validation strategy (i.e., use a whitelist). Reject any input that does not strictly conform to specifications, or transform it into something that does. Use a blacklist to reject any unexpected inputs and detect potential attacks.

When accessing a user-controlled array index, use a stringent range of values that are within the target array. Make sure that you do not allow negative values to be used. That is, verify the minimum as well as the maximum of the range of acceptable values.

Phase: Implementation

Be especially careful to validate your input when you invoke code that crosses language boundaries, such as from an interpreted language to native code. This could create an unexpected interaction between the language boundaries. Ensure that you are not violating any of the expectations of the language with which you are interfacing. For example, even though Java may not be susceptible to buffer overflows, providing a large argument in a call to native code might trigger an overflow.

Weakness Ordinalities

Ordinality	Description
Resultant	The most common condition situation leading to unchecked array indexing is the use of loop index variables as buffer indexes. If the end condition for the loop is subject to a flaw, the index can grow or shrink unbounded, therefore causing a buffer overflow or underflow. Another common situation leading to this condition is the use of a function's return value, or the resulting value of a calculation directly as an index in to a buffer.

Relationships

Nature	Type	ID	Name	View(s) this relationship pertains to
ChildOf	Weakness Class	20	Improper Input Validation	**Development Concepts (primary)699 Research Concepts (primary)1000**
ChildOf	Category	189	Numeric Errors	Development Concepts699
ChildOf	Category	633	Weaknesses that Affect Memory	**Resource-specific Weaknesses (primary)631**
ChildOf	Category	738	CERT C Secure Coding Section 04 - Integers (INT)	**Weaknesses Addressed by the CERT C Secure Coding Standard (primary)734**
ChildOf	Category	740	CERT C Secure Coding Section 06 - Arrays (ARR)	Weaknesses Addressed by the CERT C Secure Coding Standard734
ChildOf	Category	802	2010 Top 25 - Risky Resource Management	**Weaknesses in the 2010 CWE/SANS Top 25 Most Dangerous Programming Errors (primary)800**
CanPrecede	Weakness Class	119	Failure to Constrain Operations within the Bounds of a Memory Buffer	Research Concepts1000
CanPrecede	Weakness Variant	789	Uncontrolled Memory Allocation	Research Concepts1000
PeerOf	Weakness Base	124	Buffer Underwrite ('Buffer Underflow')	Research Concepts1000

Theoretical Notes

An improperly validated array index might lead directly to the always-incorrect behavior of "access of array using out-of-bounds index."

Affected Resources

- Memory

f Causal Nature

Explicit

Taxonomy Mappings

Mapped Taxonomy Name	Node ID	Fit	Mapped Node Name
CLASP			Unchecked array indexing
PLOVER			INDEX - Array index overflow
CERT C Secure Coding	ARR00-C		Understand how arrays work
CERT C Secure Coding	ARR30-C		Guarantee that array indices are within the valid range
CERT C Secure Coding	ARR38-C		Do not add or subtract an integer to a pointer if the resulting value does not refer to a valid array element
CERT C Secure Coding	INT32-C		Ensure that operations on signed integers do not result in overflow

Related Attack Patterns

CAPEC-ID	Attack Pattern Name	*(CAPEC Version: 1.5)*
100	Overflow Buffers	

References

[REF-11] M. Howard and D. LeBlanc. "Writing Secure Code". Chapter 5, "Array Indexing Errors" Page 144. 2nd Edition. Microsoft. 2002.

Content History

Submissions			
Submission Date	**Submitter**	**Organization**	**Source**
	CLASP		Externally Mined
Modifications			
Modification Date	**Modifier**	**Organization**	**Source**
2008-07-01	Sean Eidemiller	Cigital	External
	added/updated demonstrative examples		
2008-09-08	CWE Content Team	MITRE	Internal
	updated Alternate Terms, Applicable Platforms, Common Consequences, Relationships, Other Notes, Taxonomy Mappings, Weakness Ordinalities		
2008-11-24	CWE Content Team	MITRE	Internal
	updated Relationships, Taxonomy Mappings		
2009-01-12	CWE Content Team	MITRE	Internal
	updated Common Consequences		
2009-10-29	CWE Content Team	MITRE	Internal
	updated Description, Name, Relationships		
2009-12-28	CWE Content Team	MITRE	Internal
	updated Applicable Platforms, Common Consequences, Observed Examples, Other Notes, Potential Mitigations, Theoretical Notes, Weakness Ordinalities		
2010-02-16	CWE Content Team	MITRE	Internal
	updated Applicable Platforms, Demonstrative Examples, Detection Factors, Likelihood of Exploit, Potential Mitigations, References, Related Attack Patterns, Relationships		
2010-04-05	CWE Content Team	MITRE	Internal
	updated Related Attack Patterns		
Previous Entry Names			
Change Date	**Previous Entry Name**		
2009-10-29	Unchecked Array Indexing		

BACK TO TOP

Improper Access Control (Authorization)

Weakness ID: 285 *(Weakness Class)* **Status:** Draft

Description

Description Summary

The software does not perform or incorrectly performs access control checks across all potential execution paths.

Extended Description

When access control checks are not applied consistently - or not at all - users are able to access data or perform actions that they should not be allowed to perform. This can lead to a wide range of problems, including information leaks, denial of service, and arbitrary code execution.

Alternate Terms

AuthZ:	"AuthZ" is typically used as an abbreviation of "authorization" within the web application security community. It is also distinct from "AuthC," which is an abbreviation of "authentication." The use of "Auth" as an abbreviation is discouraged, since it could be used for either authentication or authorization.

Time of Introduction

- Architecture and Design
- Implementation
- Operation

Applicable Platforms

Languages

Language-independent

Technology Classes

Web-Server: *(Often)*

Database-Server: *(Often)*

Modes of Introduction

A developer may introduce authorization weaknesses because of a lack of understanding about the underlying technologies. For example, a developer may assume that attackers cannot modify certain inputs such as headers or cookies.

Authorization weaknesses may arise when a single-user application is ported to a multi-user environment.

Common Consequences

Scope	Effect
Confidentiality	An attacker could read sensitive data, either by reading the data directly from a data store that is not properly restricted, or by accessing insufficiently-protected, privileged functionality to read the data.
Integrity	An attacker could modify sensitive data, either by writing the data directly to a data store that is not properly restricted, or by accessing insufficiently-protected, privileged functionality to write the data.
Integrity	An attacker could gain privileges by modifying or reading critical data directly, or by accessing insufficiently-protected, privileged functionality.

Likelihood of Exploit

High

Detection Methods

Automated Static Analysis

Automated static analysis is useful for detecting commonly-used idioms for authorization. A tool may be able to analyze related configuration files, such as .htaccess in Apache web servers, or detect the usage of commonly-used authorization libraries.

Generally, automated static analysis tools have difficulty detecting custom authorization schemes. In addition, the software's design may include some functionality that is accessible to any user and does not require an authorization check; an automated technique that detects the absence of authorization may report false positives.

Effectiveness: Limited

Automated Dynamic Analysis

Automated dynamic analysis may find many or all possible interfaces that do not require authorization, but manual analysis is required to determine if the lack of authorization violates business logic

Manual Analysis

This weakness can be detected using tools and techniques that require manual (human) analysis, such as penetration testing, threat modeling, and interactive tools that allow the tester to record and modify an active session.

Specifically, manual static analysis is useful for evaluating the correctness of custom authorization mechanisms.

Effectiveness: Moderate

These may be more effective than strictly automated techniques. This is especially the case with weaknesses that are related to design and business rules. However, manual efforts might not achieve desired code coverage within limited time constraints.

Demonstrative Examples

Example 1

The following program could be part of a bulletin board system that allows users to send private messages to each other. This program intends to authenticate the user before deciding whether a private message should be displayed. Assume that LookupMessageObject() ensures that the $id argument is numeric, constructs a filename based on that id, and reads the message details from that file. Also assume that the program stores all private messages for all users in the same directory.

(Bad Code)

Example Language: **Perl**

```
sub DisplayPrivateMessage {
my($id) = @_;
my $Message = LookupMessageObject($id);
print "From: " . encodeHTML($Message->{from}) . "<br>\n";
print "Subject: " . encodeHTML($Message->{subject}) . "\n";
print "<hr>\n";
print "Body: " . encodeHTML($Message->{body}) . "\n";
}

my $q = new CGI;
# For purposes of this example, assume that CWE-309 and
# CWE-523 do not apply.
if (! AuthenticateUser($q->param('username'), $q->param('password'))) {
ExitError("invalid username or password");
}

my $id = $q->param('id');
DisplayPrivateMessage($id);
```

While the program properly exits if authentication fails, it does not ensure that the message is addressed to the user. As a result, an authenticated attacker could provide any arbitrary identifier and read private messages that were intended for other users.

One way to avoid this problem would be to ensure that the "to" field in the message object matches the username of the authenticated user.

Observed Examples

Reference	Description
CVE-2009-3168	Web application does not restrict access to admin scripts, allowing authenticated users to reset administrative passwords.

CVE-2009-2960	Web application does not restrict access to admin scripts, allowing authenticated users to modify passwords of other users.
CVE-2009-3597	Web application stores database file under the web root with insufficient access control (CWE-219), allowing direct request.
CVE-2009-2282	Terminal server does not check authorization for guest access.
CVE-2009-3230	Database server does not use appropriate privileges for certain sensitive operations.
CVE-2009-2213	Gateway uses default "Allow" configuration for its authorization settings.
CVE-2009-0034	Chain: product does not properly interpret a configuration option for a system group, allowing users to gain privileges.
CVE-2008-6123	Chain: SNMP product does not properly parse a configuration option for which hosts are allowed to connect, allowing unauthorized IP addresses to connect.
CVE-2008-5027	System monitoring software allows users to bypass authorization by creating custom forms.
CVE-2008-7109	Chain: reliance on client-side security (CWE-602) allows attackers to bypass authorization using a custom client.
CVE-2008-3424	Chain: product does not properly handle wildcards in an authorization policy list, allowing unintended access.
CVE-2009-3781	Content management system does not check access permissions for private files, allowing others to view those files.
CVE-2008-4577	ACL-based protection mechanism treats negative access rights as if they are positive, allowing bypass of intended restrictions.
CVE-2008-6548	Product does not check the ACL of a page accessed using an "include" directive, allowing attackers to read unauthorized files.
CVE-2007-2925	Default ACL list for a DNS server does not set certain ACLs, allowing unauthorized DNS queries.
CVE-2006-6679	Product relies on the X-Forwarded-For HTTP header for authorization, allowing unintended access by spoofing the header.
CVE-2005-3623	OS kernel does not check for a certain privilege before setting ACLs for files.
CVE-2005-2801	Chain: file-system code performs an incorrect comparison (CWE-697), preventing defauls ACLs from being properly applied.
CVE-2001-1155	Chain: product does not properly check the result of a reverse DNS lookup because of operator precedence (CWE-783), allowing bypass of DNS-based access restrictions.

Potential Mitigations

Phase: Architecture and Design

Divide your application into anonymous, normal, privileged, and administrative areas. Reduce the attack surface by carefully mapping roles with data and functionality. Use role-based access control (RBAC) to enforce the roles at the appropriate boundaries.

Note that this approach may not protect against horizontal authorization, i.e., it will not protect a user from attacking others with the same role.

Phase: Architecture and Design

Ensure that you perform access control checks related to your business logic. These checks may be different than the access control checks that you apply to more generic resources such as files, connections, processes, memory, and database records. For example, a database may restrict access for medical records to a specific database user, but each record might only be intended to be accessible to the patient and the patient's doctor.

Phase: Architecture and Design

Strategy: Libraries or Frameworks

Use a vetted library or framework that does not allow this weakness to occur or provides constructs that make this weakness

easier to avoid.

For example, consider using authorization frameworks such as the JAAS Authorization Framework and the OWASP ESAPI Access Control feature.

Phase: Architecture and Design

For web applications, make sure that the access control mechanism is enforced correctly at the server side on every page. Users should not be able to access any unauthorized functionality or information by simply requesting direct access to that page.

One way to do this is to ensure that all pages containing sensitive information are not cached, and that all such pages restrict access to requests that are accompanied by an active and authenticated session token associated with a user who has the required permissions to access that page.

Phases: System Configuration; Installation

Use the access control capabilities of your operating system and server environment and define your access control lists accordingly. Use a "default deny" policy when defining these ACLs.

Relationships

Nature	Type	ID	Name	View(s) this relationship pertains to
ChildOf	Category	254	Security Features	**Seven Pernicious Kingdoms (primary)700**
ChildOf	Weakness Class	284	Access Control (Authorization) Issues	**Development Concepts (primary)699 Research Concepts (primary)1000**
ChildOf	Category	721	OWASP Top Ten 2007 Category A10 - Failure to Restrict URL Access	**Weaknesses in OWASP Top Ten (2007) (primary)629**
ChildOf	Category	723	OWASP Top Ten 2004 Category A2 - Broken Access Control	**Weaknesses in OWASP Top Ten (2004) (primary)711**
ChildOf	Category	753	2009 Top 25 - Porous Defenses	**Weaknesses in the 2009 CWE/SANS Top 25 Most Dangerous Programming Errors (primary)750**
ChildOf	Category	803	2010 Top 25 - Porous Defenses	**Weaknesses in the 2010 CWE/SANS Top 25 Most Dangerous Programming Errors (primary)800**
ParentOf	Weakness Variant	219	Sensitive Data Under Web Root	**Research Concepts (primary)1000**
ParentOf	Weakness Base	551	Incorrect Behavior Order: Authorization Before Parsing and Canonicalization	**Development Concepts (primary)699** Research Concepts1000
ParentOf	Weakness Class	638	Failure to Use Complete Mediation	Research Concepts1000
ParentOf	Weakness Base	804	Guessable CAPTCHA	**Development Concepts (primary)699 Research Concepts (primary)1000**

Taxonomy Mappings

Mapped Taxonomy Name	Node ID	Fit	Mapped Node Name
7 Pernicious Kingdoms			Missing Access Control
OWASP Top Ten 2007	A10	CWE More Specific	Failure to Restrict URL Access
OWASP Top Ten 2004	A2	CWE More Specific	Broken Access Control

Related Attack Patterns

CAPEC-ID	Attack Pattern Name	*(CAPEC Version: 1.5)*
1	Accessing Functionality Not Properly Constrained by ACLs	
13	Subverting Environment Variable Values	

17	Accessing, Modifying or Executing Executable Files
87	Forceful Browsing
39	Manipulating Opaque Client-based Data Tokens
45	Buffer Overflow via Symbolic Links
51	Poison Web Service Registry
59	Session Credential Falsification through Prediction
60	Reusing Session IDs (aka Session Replay)
77	Manipulating User-Controlled Variables
76	Manipulating Input to File System Calls
104	Cross Zone Scripting

References

NIST. "Role Based Access Control and Role Based Security". <http://csrc.nist.gov/groups/SNS/rbac/>.

[REF-11] M. Howard and D. LeBlanc. "Writing Secure Code". Chapter 4, "Authorization" Page 114; Chapter 6, "Determining Appropriate Access Control" Page 171. 2nd Edition. Microsoft. 2002.

Content History

Submissions

Submission Date	Submitter	Organization	Source
	7 Pernicious Kingdoms		Externally Mined

Modifications

Modification Date	Modifier	Organization	Source
2008-07-01	Eric Dalci	Cigital	External
	updated Time of Introduction		
2008-08-15		Veracode	External
	Suggested OWASP Top Ten 2004 mapping		
2008-09-08	CWE Content Team	MITRE	Internal
	updated Relationships, Other Notes, Taxonomy Mappings		
2009-01-12	CWE Content Team	MITRE	Internal
	updated Common Consequences, Description, Likelihood of Exploit, Name, Other Notes, Potential Mitigations, References, Relationships		
2009-03-10	CWE Content Team	MITRE	Internal
	updated Potential Mitigations		
2009-05-27	CWE Content Team	MITRE	Internal
	updated Description, Related Attack Patterns		
2009-07-27	CWE Content Team	MITRE	Internal
	updated Relationships		
2009-10-29	CWE Content Team	MITRE	Internal
	updated Type		
2009-12-28	CWE Content Team	MITRE	Internal
	updated Applicable Platforms, Common Consequences, Demonstrative Examples, Detection Factors, Modes of Introduction, Observed Examples, Relationships		
2010-02-16	CWE Content Team	MITRE	Internal
	updated Alternate Terms, Detection Factors, Potential Mitigations, References, Relationships		
2010-04-05	CWE Content Team	MITRE	Internal
	updated Potential Mitigations		

Previous Entry Names

Change Date	Previous Entry Name
2009-01-12	Missing or Inconsistent Access Control

BACK TO TOP

Incorrect Permission Assignment for Critical Resource

Weakness ID: 732 *(Weakness Class)* **Status:** Draft

Description

Description Summary

The software specifies permissions for a security-critical resource in a way that allows that resource to be read or modified by unintended actors.

Extended Description

When a resource is given a permissions setting that provides access to a wider range of actors than required, it could lead to the disclosure of sensitive information, or the modification of that resource by unintended parties. This is especially dangerous when the resource is related to program configuration, execution or sensitive user data.

Time of Introduction

- Architecture and Design
- Implementation
- Installation
- Operation

Applicable Platforms

Languages

Language-independent

Modes of Introduction

The developer may set loose permissions in order to minimize problems when the user first runs the program, then create documentation stating that permissions should be tightened. Since system administrators and users do not always read the documentation, this can result in insecure permissions being left unchanged.

The developer might make certain assumptions about the environment in which the software runs - e.g., that the software is running on a single-user system, or the software is only accessible to trusted administrators. When the software is running in a different environment, the permissions become a problem.

Common Consequences

Scope	Effect
Confidentiality	An attacker may be able to read sensitive information from the associated resource, such as credentials or configuration information stored in a file.
Integrity	An attacker may be able to modify critical properties of the associated resource to gain privileges, such as replacing a world-writable executable with a Trojan horse.
Availability	An attacker may be able to destroy or corrupt critical data in the associated resource, such as deletion of records from a database.

Likelihood of Exploit

Medium to High

Detection Methods

Automated Static Analysis

Automated static analysis may be effective in detecting permission problems for system resources such as files, directories, shared memory, device interfaces, etc. Automated techniques may be able to detect the use of library functions that modify permissions, then analyze function calls for arguments that contain potentially insecure values.

However, since the software's intended security policy might allow loose permissions for certain operations (such as publishing a file on a web server), automated static analysis may produce some false positives - i.e., warnings that do not have any security consequences or require any code changes.

When custom permissions models are used - such as defining who can read messages in a particular forum in a bulletin board system - these can be difficult to detect using automated static analysis. It may be possible to define custom signatures that

identify any custom functions that implement the permission checks and assignments.

Automated Dynamic Analysis

Automated dynamic analysis may be effective in detecting permission problems for system resources such as files, directories, shared memory, device interfaces, etc.

However, since the software's intended security policy might allow loose permissions for certain operations (such as publishing a file on a web server), automated dynamic analysis may produce some false positives - i.e., warnings that do not have any security consequences or require any code changes.

When custom permissions models are used - such as defining who can read messages in a particular forum in a bulletin board system - these can be difficult to detect using automated dynamic analysis. It may be possible to define custom signatures that identify any custom functions that implement the permission checks and assignments.

Manual Static Analysis

Manual static analysis may be effective in detecting the use of custom permissions models and functions. The code could then be examined to identifying usage of the related functions. Then the human analyst could evaluate permission assignments in the context of the intended security model of the software.

Manual Dynamic Analysis

Manual dynamic analysis may be effective in detecting the use of custom permissions models and functions. The program could then be executed with a focus on exercising code paths that are related to the custom permissions. Then the human analyst could evaluate permission assignments in the context of the intended security model of the software.

Fuzzing

Fuzzing is not effective in detecting this weakness.

Demonstrative Examples

Example 1

The following code sets the umask of the process to 0 before creating a file and writing "Hello world" into the file.

(Bad Code)

Example Language: **C**

```
#define OUTFILE "hello.out"

umask(0);
FILE *out;
/* Ignore CWE-59 (link following) for brevity */
out = fopen(OUTFILE, "w");
if (out) {
fprintf(out, "hello world!\n");
fclose(out);
}
```

After running this program on a UNIX system, running the "ls -l" command might return the following output:

(Result)

```
-rw-rw-rw- 1 username 13 Nov 24 17:58 hello.out
```

The "rw-rw-rw-" string indicates that the owner, group, and world (all users) can read the file and write to it.

Example 2

The following code snippet might be used as a monitor to periodically record whether a web site is alive. To ensure that the file can always be modified, the code uses chmod() to make the file world-writable.

(Bad Code)

Example Language: **Perl**

```
$fileName = "secretFile.out";

if (-e $fileName) {
chmod 0777, $fileName;
}
```

```
my $outFH;
if (! open($outFH, ">>$fileName")) {
ExitError("Couldn't append to $fileName: $!");
}
my $dateString = FormatCurrentTime();
my $status = IsHostAlive("cwe.mitre.org");
print $outFH "$dateString cwe status: $status!\n";
close($outFH);
```

The first time the program runs, it might create a new file that inherits the permissions from its environment. A file listing might look like:

(Result)

```
-rw-r--r-- 1 username 13 Nov 24 17:58 secretFile.out
```

This listing might occur when the user has a default umask of 022, which is a common setting. Depending on the nature of the file, the user might not have intended to make it readable by everyone on the system.

The next time the program runs, however - and all subsequent executions - the chmod will set the file's permissions so that the owner, group, and world (all users) can read the file and write to it:

(Result)

```
-rw-rw-rw- 1 username 13 Nov 24 17:58 secretFile.out
```

Perhaps the programmer tried to do this because a different process uses different permissions that might prevent the file from being updated.

Example 3

The following command recursively sets world-readable permissions for a directory and all of its children:

(Bad Code)

Example Language: **Shell**

```
chmod -R ugo+r DIRNAME
```

If this command is run from a program, the person calling the program might not expect that all the files under the directory will be world-readable. If the directory is expected to contain private data, this could become a security problem.

Observed Examples

Reference	Description
CVE-2009-3482	Anti-virus product sets insecure "Everyone: Full Control" permissions for files under the "Program Files" folder, allowing attackers to replace executables with Trojan horses.
CVE-2009-3897	Product creates directories with 0777 permissions at installation, allowing users to gain privileges and access a socket used for authentication.
CVE-2009-3489	Photo editor installs a service with an insecure security descriptor, allowing users to stop or start the service, or execute commands as SYSTEM.
CVE-2009-3289	Library function copies a file to a new target and uses the source file's permissions for the target, which is incorrect when the source file is a symbolic link, which typically has 0777 permissions.
CVE-2009-0115	Device driver uses world-writable permissions for a socket file, allowing attackers to inject arbitrary commands.
CVE-2009-1073	LDAP server stores a cleartext password in a world-readable file.
CVE-2009-0141	Terminal emulator creates TTY devices with world-writable permissions, allowing an attacker to write to the terminals of other users.

CVE-2008-0662	VPN product stores user credentials in a registry key with "Everyone: Full Control" permissions, allowing attackers to steal the credentials.
CVE-2008-0322	Driver installs its device interface with "Everyone: Write" permissions.
CVE-2009-3939	Driver installs a file with world-writable permissions.
CVE-2009-3611	Product changes permissions to 0777 before deleting a backup; the permissions stay insecure for subsequent backups.
CVE-2007-6033	Product creates a share with "Everyone: Full Control" permissions, allowing arbitrary program execution.
CVE-2007-5544	Product uses "Everyone: Full Control" permissions for memory-mapped files (shared memory) in inter-process communication, allowing attackers to tamper with a session.
CVE-2005-4868	Database product uses read/write permissions for everyone for its shared memory, allowing theft of credentials.
CVE-2004-1714	Security product uses "Everyone: Full Control" permissions for its configuration files.
CVE-2001-0006	"Everyone: Full Control" permissions assigned to a mutex allows users to disable network connectivity.
CVE-2002-0969	Chain: database product contains buffer overflow that is only reachable through a .ini configuration file - which has "Everyone: Full Control" permissions.

Potential Mitigations

Phase: Implementation

When using a critical resource such as a configuration file, check to see if the resource has insecure permissions (such as being modifiable by any regular user), and generate an error or even exit the software if there is a possibility that the resource could have been modified by an unauthorized party.

Phase: Architecture and Design

Divide your application into anonymous, normal, privileged, and administrative areas. Reduce the attack surface by carefully defining distinct user groups, privileges, and/or roles. Map these against data, functionality, and the related resources. Then set the permissions accordingly. This will allow you to maintain more fine-grained control over your resources.

Phases: Implementation; Installation

During program startup, explicitly set the default permissions or umask to the most restrictive setting possible. Also set the appropriate permissions during program installation. This will prevent you from inheriting insecure permissions from any user who installs or runs the program.

Phase: System Configuration

For all configuration files, executables, and libraries, make sure that they are only readable and writable by the software's administrator.

Phase: Documentation

Do not suggest insecure configuration changes in your documentation, especially if those configurations can extend to resources and other software that are outside the scope of your own software.

Phase: Installation

Do not assume that the system administrator will manually change the configuration to the settings that you recommend in the manual.

Phase: Testing

Use tools and techniques that require manual (human) analysis, such as penetration testing, threat modeling, and interactive tools that allow the tester to record and modify an active session. These may be more effective than strictly automated techniques. This is especially the case with weaknesses that are related to design and business rules.

Phase: Testing

Use monitoring tools that examine the software's process as it interacts with the operating system and the network. This technique is useful in cases when source code is unavailable, if the software was not developed by you, or if you want to verify that the build phase did not introduce any new weaknesses. Examples include debuggers that directly attach to the running process; system-call tracing utilities such as truss (Solaris) and strace (Linux); system activity monitors such as FileMon, RegMon, Process Monitor, and other Sysinternals utilities (Windows); and sniffers and protocol analyzers that monitor network traffic.

Attach the monitor to the process and watch for library functions or system calls on OS resources such as files, directories, and shared memory. Examine the arguments to these calls to infer which permissions are being used.

Note that this technique is only useful for permissions issues related to system resources. It is not likely to detect application-level business rules that are related to permissions, such as if a user of a blog system marks a post as "private," but the blog system inadvertently marks it as "public."

Phases: Testing; System Configuration

Ensure that your software runs properly under the Federal Desktop Core Configuration (FDCC) or an equivalent hardening configuration guide, which many organizations use to limit the attack surface and potential risk of deployed software.

Relationships

Nature	Type	ID	Name	View(s) this relationship pertains to
ChildOf	Category	275	Permission Issues	**Development Concepts (primary)699**
ChildOf	Weakness Class	668	Exposure of Resource to Wrong Sphere	**Research Concepts (primary)1000**
ChildOf	Category	753	2009 Top 25 - Porous Defenses	**Weaknesses in the 2009 CWE/SANS Top 25 Most Dangerous Programming Errors (primary)750**
ChildOf	Category	803	2010 Top 25 - Porous Defenses	**Weaknesses in the 2010 CWE/SANS Top 25 Most Dangerous Programming Errors (primary)800**
RequiredBy	Compound Element: Composite	689	Permission Race Condition During Resource Copy	Research Concepts1000
ParentOf	Weakness Variant	276	Incorrect Default Permissions	**Research Concepts (primary)1000**
ParentOf	Weakness Variant	277	Insecure Inherited Permissions	**Research Concepts (primary)1000**
ParentOf	Weakness Variant	278	Insecure Preserved Inherited Permissions	**Research Concepts (primary)1000**
ParentOf	Weakness Variant	279	Incorrect Execution-Assigned Permissions	**Research Concepts (primary)1000**
ParentOf	Weakness Base	281	Improper Preservation of Permissions	**Research Concepts (primary)1000**

Related Attack Patterns

CAPEC-ID	Attack Pattern Name	*(CAPEC Version: 1.5)*
232	Exploitation of Privilege/Trust	
1	Accessing Functionality Not Properly Constrained by ACLs	
17	Accessing, Modifying or Executing Executable Files	
60	Reusing Session IDs (aka Session Replay)	
61	Session Fixation	
62	Cross Site Request Forgery (aka Session Riding)	
122	Exploitation of Authorization	
180	Exploiting Incorrectly Configured Access Control Security Levels	
234	Hijacking a privileged process	

References

Mark Dowd, John McDonald and Justin Schuh. "The Art of Software Security Assessment". Chapter 9, "File Permissions." Page 495.. 1st Edition. Addison Wesley. 2006.

John Viega and Gary McGraw. "Building Secure Software". Chapter 8, "Access Control." Page 194.. 1st Edition. Addison-Wesley. 2002.

Maintenance Notes

The relationships between privileges, permissions, and actors (e.g. users and groups) need further refinement within the Research view. One complication is that these concepts apply to two different pillars, related to control of resources (CWE-664) and protection mechanism failures (CWE-396).

Content History

Submissions			
Submission Date	**Submitter**	**Organization**	**Source**
2008-09-08			Internal CWE Team
	new weakness-focused entry for Research view.		
Modifications			
Modification Date	**Modifier**	**Organization**	**Source**
2009-01-12	CWE Content Team	MITRE	Internal
	updated Description, Likelihood of Exploit, Name, Potential Mitigations, Relationships		
2009-03-10	CWE Content Team	MITRE	Internal
	updated Potential Mitigations, Related Attack Patterns		
2009-05-27	CWE Content Team	MITRE	Internal
	updated Name		
2009-12-28	CWE Content Team	MITRE	Internal
	updated Applicable Platforms, Common Consequences, Demonstrative Examples, Detection Factors, Modes of Introduction, Observed Examples, Potential Mitigations, References		
2010-02-16	CWE Content Team	MITRE	Internal
	updated Relationships		
2010-04-05	CWE Content Team	MITRE	Internal
	updated Potential Mitigations, Related Attack Patterns		
Previous Entry Names			
Change Date	**Previous Entry Name**		
2009-01-12	Insecure Permission Assignment for Resource		
2009-05-27	Insecure Permission Assignment for Critical Resource		

BACK TO TOP

Exposure of System Data to Unauthorized Control Sphere

Risk

What might happen

System data can provide attackers with valuable insights on systems and services they are targeting - any type of system data, from service version to operating system fingerprints, can assist attackers to hone their attack, correlate data with known vulnerabilities or focus efforts on developing new attacks against specific technologies.

Cause

How does it happen

System data is read and subsequently exposed where it might be read by untrusted entities.

General Recommendations

How to avoid it

Consider the implications of exposure of the specified input, and expected level of access to the specified output. If not required, consider removing this code, or modifying exposed information to exclude potentially sensitive system data.

Source Code Examples

Java

Leaking Environment Variables in JSP Web-Page

```
String envVarValue = System.getenv(envVar);
if (envVarValue == null) {
    out.println("Environment variable is not defined:");
    out.println(System.getenv());
} else {
    //[..]
};
```

TOCTOU

Risk

What might happen

At best, a Race Condition may cause errors in accuracy, overidden values or unexpected behavior that may result in denial-of-service. At worst, it may allow attackers to retrieve data or bypass security processes by replaying a controllable Race Condition until it plays out in their favor.

Cause

How does it happen

Race Conditions occur when a public, single instance of a resource is used by multiple concurrent logical processes. If the these logical processes attempt to retrieve and update the resource without a timely management system, such as a lock, a Race Condition will occur.

An example for when a Race Condition occurs is a resource that may return a certain value to a process for further editing, and then updated by a second process, resulting in the original process' data no longer being valid. Once the original process edits and updates the incorrect value back into the resource, the second process' update has been overwritten and lost.

General Recommendations

How to avoid it

When sharing resources between concurrent processes across the application ensure that these resources are either thread-safe, or implement a locking mechanism to ensure expected concurrent activity.

Source Code Examples

Java

Different Threads Increment and Decrement The Same Counter Repeatedly, Resulting in a Race Condition

```
	public static int counter = 0;
	public static void start() throws InterruptedException {
		incrementCounter ic;
		decrementCounter dc;
		while(counter == 0) {
			counter = 0;
			ic = new incrementCounter();
			dc = new decrementCounter();
			ic.start();
			dc.start();
			ic.join();
			dc.join();
		}
		System.out.println(counter); //Will stop and return either -1 or 1 due to race
condition over counter
	}

	public static class incrementCounter extends Thread {
	    public void run() {
		counter++;
	    }
```

```
}

public static class decrementCounter extends Thread {
    public void run() {
       counter--;
    }
}
```

Different Threads Increment and Decrement The Same Thread-Safe Counter Repeatedly, Never Resulting in a Race Condition

```
public static int counter = 0;
public static Object lock = new Object();

public static void start() throws InterruptedException {
       incrementCounter ic;
       decrementCounter dc;
       while(counter == 0) { // because of proper locking, this condition is never false
              counter = 0;
              ic = new incrementCounter();
              dc = new decrementCounter();
              ic.start();
              dc.start();
              ic.join();
              dc.join();
       }
       System.out.println(counter); // Never reached
}

public static class incrementCounter extends Thread {
    public void run() {
       synchronized (lock) {
              counter++;
       }
    }
}

public static class decrementCounter extends Thread {
    public void run() {
       synchronized (lock) {
              counter--;
       }
    }
}
```

Scanned Languages

Language	Hash Number	Change Date
CPP	4541647240435660	6/19/2024
Common	0105849645654507	6/19/2024