

#	Feature Name	Description	Type	Value Type	Ranges (Between both train and test)	
1	Duration	Length of time duration of the connection	Continuous	Integers	0 - 54451	
2	Protocol Type	Protocol used in the connection	Categorical	Strings		
3	Service	Destination network service used	Categorical	Strings		
4	Flag	Status of the connection – Normal or Error	Categorical	Strings		
5	Src Bytes	Number of data bytes transferred from source to destination in single connection	Continuous	Integers	0 - 1379963888	
6	Dst Bytes	Number of data bytes transferred from destination to source in single connection	Continuous	Integers	0 - 309937401	
7	Land	If source and destination IP addresses and port numbers are equal then, this variable takes value 1 else 0	Binary	Integers	{ 0 , 1 }	*** Values within {} are exact/possible values.
8	Wrong Fragment	Total number of wrong fragments in this connection	Discrete	Integers	{ 0,1,3 }	
9	Urgent	Number of urgent packets in this connection. Urgent packets are packets with the urgent bit activated	Discrete	Integers	0 - 3	
10	Hot	Number of "hot" indicators in the content such as: entering a system directory, creating programs and executing programs	Continuous	Integers	0 - 101	
11	Num Failed Logins	Count of failed login attempts	Continuous	Integers	0 - 4	
12	Logged In	Login Status : 1 if successfully logged in; 0 otherwise	Binary	Integers	{ 0 , 1 }	
13	Num Compromised	Number of "compromised" conditions	Continuous	Integers	0 - 7479	
14	Root Shell	1 if root shell is obtained; 0 otherwise	Binary	Integers	{ 0 , 1 }	
15	Su Attempted	1 if "su root" command attempted or used; 0 otherwise	Discrete (Dataset contains '2' value)	Integers	0 - 2	
16	Num Root	Number of "root" accesses or number of operations performed as a root in the connection	Continuous	Integers	0 - 7468	
17	Num File Creations	Number of file creation operations in the connection	Continuous	Integers	0 - 100	
18	Num Shells	Number of shell prompts	Continuous	Integers	0 - 2	

19	Num Access Files	Number of operations on access control files	Continuous	Integers	0 - 9	
20	Num Outbound Cmds	Number of outbound commands in an ftp session	Continuous	Integers	{ 0 }	
21	Is Hot Logins	1 if the login belongs to the "hot" list i. e., root or admin; else 0	Binary	Integers	{ 0 , 1 }	
22	Is Guest Login	1 if the login is a "guest" login; 0 otherwise	Binary	Integers	{ 0 , 1 }	
23	Count	Number of connections to the same destination host as the current connection in the past two seconds	Discrete	Integers	0 - 511	
24	Srv Count	Number of connections to the same service (port number) as the current connection in the past two seconds	Discrete	Integers	0 - 511	
25	Error Rate	The percentage of connections that have activated the flag (4) s0, s1, s2 or s3, among the connections aggregated in count (23)	Discrete	Floats (hundredths of a decimal)	0 - 1	
26	Srv Error Rate	The percentage of connections that have activated the flag (4) s0, s1, s2 or s3, among the connections aggregated in srv_count (24)	Discrete	Floats (hundredths of a decimal)	0 - 1	
27	Error Rate	The percentage of connections that have activated the flag (4) REJ, among the connections aggregated in count (23)	Discrete	Floats (hundredths of a decimal)	0 - 1	
28	Srv Error Rate	The percentage of connections that have activated the flag (4) REJ, among the connections aggregated in srv_count (24)	Discrete	Floats (hundredths of a decimal)	0 - 1	
29	Same Srv Rate	The percentage of connections that were to the same service, among the connections aggregated in count (23)	Discrete	Floats (hundredths of a decimal)	0 - 1	
30	Diff Srv Rate	The percentage of connections that were to different services, among the connections aggregated in count (23)	Discrete	Floats (hundredths of a decimal)	0 - 1	
31	Srv Diff Host Rate	The percentage of connections that were to different destination machines among the connections aggregated in srv_count (24)	Discrete	Floats (hundredths of a decimal)	0 - 1	
32	Dst Host Count	Number of connections having the same destination host IP address	Discrete	Integers	0 - 255	
33	Dst Host Srv Count	Number of connections having the same port number	Discrete	Integers	0 - 255	

34	Dst Host Same Srv Rate	The percentage of connections that were to different services, among the connections aggregated in dst_host_count (32)	Discrete	Floats (hundredths of a decimal)	0 - 1	
35	Dst Host Diff Srv Rate	The percentage of connections that were to different services, among the connections aggregated in dst_host_count (32)	Discrete	Floats (hundredths of a decimal)	0 - 1	
36	Dst Host Same Src Port Rate	The percentage of connections that were to the same source port, among the connections aggregated in dst_host_srv_count (33)	Discrete	Floats (hundredths of a decimal)	0 - 1	
37	Dst Host Srv Diff Host Rate	The percentage of connections that were to different destination machines, among the connections aggregated in dst_host_srv_count (33)	Discrete	Floats (hundredths of a decimal)	0 - 1	
38	Dst Host Serror Rate	The percentage of connections that have activated the flag (4) s0, s1, s2 or s3, among the connections aggregated in dst_host_count (32)	Discrete	Floats (hundredths of a decimal)	0 - 1	
39	Dst Host Srv Serror Rate	The percent of connections that have activated the flag (4) s0, s1, s2 or s3, among the connections aggregated in dst_host_srv_count (33)	Discrete	Floats (hundredths of a decimal)	0 - 1	
40	Dst Host Rerror Rate	The percentage of connections that have activated the flag (4) REJ, among the connections aggregated in dst_host_count (32)	Discrete	Floats (hundredths of a decimal)	0 - 1	
41	Dst Host Srv Rerror Rate	The percentage of connections that have activated the flag (4) REJ, among the connections aggregated in dst_host_srv_count (33)	Discrete	Floats (hundredths of a decimal)	0 - 1	
42	Class	Classification of the traffic input	Categorical	Strings		
43	Difficulty Level	Difficulty level	Discrete	Integers	0 - 21	