

DarkOwl Darknet Index: 2019 Fortune 500 Edition

RERANKING THE 2019 FORTUNE 500* USING DARKINT™
SCORING INTELLIGENCE

INTRODUCTION



The Fortune 500 - Key Takeaways from our 2019 Analysis

This is our third annual whitepaper in which we evaluate and re-rank the Fortune 500 via the size of their darknet footprint. Data breaches of companies and enterprises continue apace, with notable data breaches during the 12 months since the issue of our 2018 paper including Facebook, Google Plus, Marriott International, British Airways, Orbitz, T-Mobile and Under Armour. While no company is immune from data breaches, the size, nature and magnitude of breaches provide one measure of how well protected an enterprise is from a cybersecurity perspective.

DarkOwl has found that measuring how much data is available in the darknet post breach provides a meaningful measure of cyber risk. The continuing presence of credentials, administrative credentials, network information, and other confidential data in the darknet often provide hackers and those with malintent the tools to further compromise organizations and enterprises. DarkOwl tries to objectively measure this risk by calculating DARKINT scores.

These scores are calculated via measuring the size, freshness and Hackishness™ of data available for each individual company in the darknet. The higher the score, the more relevant harmful information is publicly available, and the greater the risk that criminals can exploit this data.

DarkOwl began offering DARKINT Scores as part of its user interface in mid-2018, and launched them as an API product in March 2019. Users can easily follow how an individual company score can change, along with the summary data used in calculating the scores. These scores are dynamic

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because our proprietary database of darknet content is automatically and continuously updated with between 18 to 20 million scraped pages daily. The database itself now amounts to more than 160,000 historical domains from the Tor network alone, as well as other darknet networks, including I2P, FTP, IRC, and ZeroNet. Added to this purely darknet information is data collected from over 100 paste sites and over 250 darknet forums, such as CrimeNetwork and DarkMarket. All this darknet content is indexed and searchable in 47 languages for organizations who may wish to understand in depth why a given score has changed.

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KEY FINDINGS



The Fortune 500 - Key Takeaways from our 2019 Analysis

- **The average Fortune 500 company is still exposed, and to a greater degree than ever.** The average Fortune 500 DARKINT score climbed from 8.2 to 9.3 meaning that there is over three times the relevant information on the typical Fortune 500 firm as compared to a year ago. While this increase may be due in part to an increase in DarkOwl's own collection capabilities, it is largely indicative of the increasing amount of information posted to the darknet..
- **Frontier Communications continues to lead the Index, and its stock price continues to fall.** For the second year in a row, Frontier remained at #1 in our rankings. Frontier's stock price declined by over half in 2018 (following an 80% decline in 2017).
- **Stock price declines might be correlated with higher DARKINT scores.** Of note, while the broader stock market lost 2% during this period, the top 50 DARKINT ranked firms lost an average of 8.1%. Those ranked 51-100 lost an average of 5.5% while those ranked 101-200 and 201-300 lost just under 4%. In aggregate there appears to be a correlation between darknet risk and overall business performance, as measured by the stock market.
- **The worst sectors are still Telecommunications and Technology companies.** The Telecommunications Industry now fares significantly worse than the broader Technology sector, perhaps reflecting the massive spending on cybersecurity by tech companies. The 8 telecommunications firms' score nearly doubled this year to an average 14.8 as compared to 11 for the 42 Technology sector companies. Both sectors account for all 5 of the highest scoring firms.
- **Financial firms are now just average in their darknet profile.** Last year 3 of the top 10 scores were financial. This year, their worst performer is Wells Fargo which comes in at #12.
- **The worst performing firms had the highest percentage of new data.** The average Fortune 500 firm could attribute roughly 10% of their score related to non-breach information posted within the last 90 days. In contrast, the top 10 re-ranked firms had almost 30% of their score attributable to recent non-breach data.



Here's how this year's Top 10 scored in our past two reports

	Frontier Comm.	Apple	Comcast	Charter Comm.	Verizon	Dell Tech.	General Electric	Proctor & Gamble	Pfizer	Dow-Dupont
2019	19.87	18.10	17.21	16.79	16.44	15.76	15.38	15.37	15.05	14.88
2018	20.14	14.62	11.50	11.31	13.48	n/a	15.08	13.42	15.07	n/a
2017	13.29	15.98	12.01	9.91	10.32	n/a	12.00	10.08	10.40	n/a

ABOUT DARKINT SCORES



Scoring Methodology

- DarkOwl has used the exact same objective DARKINT scoring algorithm since May 2017. We count the specific matches on each company’s website and email domains and then weigh these results based on “hackishness”— our algorithmic rating system which assesses the likelihood the data could be used for criminal purposes. Results posted to the darknet from within the last 90 days are given the most weight. All mirror sites (which can be otherwise considered duplicate data) of both darknet and surface net results are excluded.
- While this paper measures static scores at one point in time, a far more dynamic method of monitoring risk is to monitor on an ongoing basis. As new results are found they are measured for hackishness, and the score may increase—sometimes substantially. DarkOwl’s new DARKINT interface and API allow for dynamic monitoring of scores.
- While it is often difficult to determine direct cause and effect, we have found that the darknet score of a company can vary widely in conjunction with the company becoming newsworthy. For example, PSEG’s DARKINT score rose significantly during the period when the California fires were in the headlines, and when rumors of bankruptcy arose.

PSEG Score Analysis	12/20/18	1/3/19
Score	10.04	11.09
Number of darknet domains	0	15
Number of darknet emails	0	13
Hackishness last 90 days	88%	51%



The Scoring Algorithm

The DARKINT algorithm is simple and objective. The scale is logarithmic, meaning every point in the index reflects almost triple the profile of a single point less (assuming hackishness scores to be comparable).

Our Hackishness™ algorithm (embedded within our ranking algorithm) is the most critical input to these rankings as it eliminates uninteresting and not dangerous content hits. For simplicity, our algorithm weights results from Darknet Hidden Services (such as Tor, ZeroNet, etc.), and transitory sites (select Paste sites) most heavily. All results found in our database were given some weight as per the formula included here.

$$\text{SCORE} = \ln \text{H90} + \ln \text{RDS} + \ln \text{RTS} + \ln \text{HATR}$$

- H90 = Hackishness of last 90 days results
- HATR = Hackishness of all time breach results
- RDS = # results from Darknet Sites
- RTS = # results from Transitory Paste Sites
- ATR = # results from all time breach results

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Reranking the 2019 Fortune 500 using DARKINT™ scoring intelligence



THE TOP 25 COMPANIES IN OUR INDEX

Darknet Rank	2018 Rank	Fortune 500 Rank	Company	2019 Score	Score Change	% New Data	Sector
1	1	325	Frontier Communications	19.87	- 0.28	37.3 %	Telecom
2	15	4	Apple	19.41	4.79	31.3 %	Technology
3	78	33	Comcast	18.10	6.59	28.5 %	Telecom
4	82	74	Charter Communications	17.21	5.89	32.5 %	Telecom
5	24	16	Verizon	16.79	3.30	24.9 %	Telecom
6	n/a	35	Dell Technologies	16.44	n/a	27.9 %	Technology
7	12	18	General Electric	15.76	0.68	25.7 %	Industrials
8	25	42	Procter & Gamble	15.38	1.96	26.1	Household Products
9	13	57	Pfizer	15.37	0.30	26.2	Health Care
10	72	47	DowDupont	15.05	3.45	25.5	Chemicals
11	84	111	Abbott Laboratories	14.88	3.59	24.9	Health Care
12	21	26	Wells Fargo	14.78	0.67	22.4	Financial
13	48	127	Marriott International	14.77	2.46	26.5	Energy
14	n/a	374	DXC Technology	14.74	n/A	25.5	Technology
15	30	9	AT&T	14.58	1.34	17.4	Telecom
16	27	13	Chevron	14.53	1.13	23.9	Energy
17	477	37	Johnson & Johnson	14.52	11.22	21.7	Health Care
18	3	10	General Motors	14.51	- 2.45	24.4	Motor Vehicles
19	63	78	Merck	14.49	2.70	23.5	Health Care
20	11	58	HP	14.45	- 0.64	19.1	Technology
21	45	207	CBRE Group	14.40	1.89	26.0	Financials
22	54	199	Monsanto	14.18	2.18	28.2	Chemicals
23	133	158	Western Digital	14.10	3.86	33.8	Technology
24	14	36	State Farm Insurance Cos.	14.07	- 0.56	21.3	Financial
25	2	80	Allstate	14.02	-4.23	19.1	Financials



DARKINT Index Top 25: Category Descriptions

The results of our analysis are presented here for the top 25 companies in our 2019 Fortune 500 Index.

We categorize all companies using the following metrics:

- **Darknet Rank** - The rank of each company based on their DARKINT index score (lower ranks indicating higher darknet exposure).
- **2018 Rank** - The rank of each company based on their DARKINT index score in December 2018.
- **Fortune 500 Rank** - The rank each company is given on the 2019 annual, publicized list.
- **2019 Score** - The algorithmic DARKINT score based on DarkOwl data.
- **Score Change** - The difference between the algorithmic score in 2018 vs. 2019.
- **% New Data** - The percentage of data found within the last 90 days.
- **Sector** - The market segment as defined by the Fortune 500 list.

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Reranking the 2019 Fortune 500 using DARKINT™ scoring intelligence



Observations about the DARKINT Index Top 25

Most companies in the Fortune 500 have scores which have increased substantially since we began reporting. While the sheer volume of information available on the darknet has increased, our capacity to collect hackish content has also gotten markedly better over this time as well.

The company with the largest DARKINT score remains Frontier Communications, but this year the telecoms Comcast, Charter and Verizon join the top of our list. AT&T comes in at #15. Overall, we see another 5 Technology firms, 4 Healthcare and 4 financial firms in the top 25. As noted above, the top ranking DARKINT score companies have as a group also underperformed the broader market by about

6%, though there are doubtless many reasons for this group's underperformance beyond their darknet profiles.

We have long predicted that the nature of our algorithm's reliance on recent data made our rankings very dynamic. Over time, we have seen the Top 5 DARKINT Index roster transition from predominantly technology firms to financial firms to telcom firms. In fact, were we to run our report just 30 days after this report was first run, Apple would not be in the top 25. The amount of data on the darknet, and its hackishness changes greatly over relative short periods of time.

SECTOR ANALYSIS



Index Profile Analysis by Company Sector

We again included an Index Profile analysis to show how all company's relative DARKINT Index score compares to their Fortune 500 rankings. We included this analysis to demonstrate that companies of various sectors, size and revenue may have disproportionate DARKINT footprints, and to show the year-over-year change in each Sector.

Sector	# Entries	Average Fortune 500 Rank	Average DARK-INT Rank	Average DARKINT Score	Average Change in DARKINT Score	% of Score from New Data
Technology	42	226	163	11.06	3.65	11.29%
Retail	44	246	317	8.25	(0.47)	4.45%
Energy	60	258	284	8.73	0.43	5.05%
Financials	78	286	253	9.28	1.25	6.70%
Health Care	42	181	212	10.04	1.34	8.50%
Telecom	8	163	74	14.79	7.00	21.52%
Wholesale	24	265	334	7.83	0.39	2.87%
Media	11	269	269	8.82	(0.50)	4.45%
Food, Beverages and Tobacco	24	256	299	8.51	0.75	4.41%
Aerospace & Defense	12	214	195	10.10	1.20	10.94%
Transportation	17	233	230	9.64	1.63	8.34%
Industrials	14	204	176	10.48	2.26	13.29%
Food and Drug Stores	8	58	265	9.15	(0.49)	4.83%

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Sector	# Entries	Average Fortune 500 Rank	Average DARK-INT Rank	Average DARKINT Score	Average Change in DARKINT Score	% of Score from New Data
Chemicals	14	295	220	9.87	0.20	9.18%
Business Services	21	320	238	9.40	1.29	6.69%
Apparel	5	303	306	8.35	(0.99)	5.61%
Household Products	12	292	237	9.49	2.52	7.48%
Motor Vehicles	14	262	272	8.95	1.38	5.89%
Hotels, Restaurants and Leisure	10	329	274	8.57	1.06	5.96%
Engineering Construction	12	314	273	9.07	2.21	6.32%
Materials	20	333	308	8.04	(1.21)	6.53%



Key takeaways from Sector Analysis

- Besides the Telecommunications and Technology sectors worsening, little other progress or deterioration is notable. Both host large databases of credentials.
- Financial firms have stabilized their DARKINT scores, indicating that for the time being they are spending adequately to protect their data. Non-banks, particularly Insurance, have continued to worsen.
- These scores and rankings will continue to change markedly over time based on multiple factors both within a company's control and beyond.

CONCLUSIONS

This year's re-ranking of the Fortune 500 based by darknet exposure presents a mere sliver of DarkOwl's database which includes information on a very large number of organizations and individuals.

DARKINT Scores have direct application for breach compliance, privacy laws, and the changing cybersecurity regulatory landscape. Increasingly, firms are held to the standard that they are expected to know of their own darknet specific content even if examining that content requires elaborate compliance protocols. Dynamic DARKINT scores offer compelling information beyond mere compliance, to actionable intelligence. For example,

cyber insurance underwriters might want to know of the historical scores before pricing a policy. Poor trends in these scores might lead to a pricing adjustment because they signal that the firm may have poor security.

As another example, an organization looking at vendors may choose to rank them with DARKINT scores to assess overall risk. Firms should monitor their darknet score just like they do their credit score, because this information is increasingly part of what their employees, vendors, customers, and shareholders regularly review.

DARKINT INDEX: THE FORTUNE 500

THE FULL LIST OF ALL 500 COMPANIES RE-RANKED BY DARKINT SCORE

Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
1	325	Frontier Communications	19.87	Telecom
2	4	Apple	19.41	Technology
3	33	Comcast	18.10	Telecom
4	74	Charter Communications	17.21	Telecom
5	16	Verizon	16.79	Telecom
6	35	Dell Technologies	16.44	Technology
7	18	General Electric	15.76	Industrials
8	42	Procter & Gamble	15.38	Household Products
9	57	Pfizer	15.37	Health Care
10	47	DowDupont	15.05	Chemicals
11	111	Abbott Laboratories	14.88	Health Care
12	26	Wells Fargo	14.78	Financial
13	127	Marriott International	14.77	Energy
14	374	DXC Technology	14.74	Technology
15	9	AT&T	14.58	Telecom
16	13	Chevron	14.53	Energy
17	37	Johnson & Johnson	14.52	Health Care
18	10	General Motors	14.51	Motor Vehicles
19	78	Merck	14.49	Health Care
20	58	HP	14.45	Technology
21	207	CBRE Group	14.40	Financials
22	199	Monsanto	14.18	Chemicals
23	158	Western Digital	14.10	Technology
24	36	State Farm Insurance Cos.	14.07	Financial
25	80	Allstate	14.02	Financials
26	243	ADP	13.96	Business Services
27	77	Honeywell International	13.85	Industrials
28	297	Jacobs Engineering Group	13.83	Engineering Construction
29	66	Nationwide	13.81	Financials
30	34	IBM	13.56	Technology
31	129	Eli Lilly	13.55	Health Care
32	11	Ford Motor	13.55	Motor Vehicles
33	474	Windstream Holdings	13.49	Telecom

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
34	76	Facebook	13.40	Technology
35	59	Lockheed Martin	13.38	Aerospace & Defense
36	27	Boeing	13.37	Aerospace & Defense
37	324	Hilton Worldwide Holdings	13.31	Hotels, Restaurants and Leisure
38	146	Halliburton	13.30	Energy
39	153	Fluor	13.27	Engineering Construction
40	356	Jones Lang LaSalle	13.23	Financials
41	60	AIG	13.19	Financials
42	22	Alphabet (Google)	13.16	Technology
43	51	United Technologies	13.09	Aerospace & Defense
44	119	Raytheon	13.05	Aerospace & Defense
45	311	American Family Insurance Group	13.02	Financials
46	70	Goldman Sachs Group	12.99	Financials
47	292	Leidos Holdings	12.98	Technology
48	43	MetLife	12.96	Financial
49	2	Exxon Mobil	12.92	Energy
50	145	Bristol-Myers Squibb	12.86	Health Care
51	178	Emerson Electric	12.84	Industrials
52	72	Best Buy	12.84	Retail
53	63	HCA Holdings	12.79	Health Care
54	283	Baxter International	12.77	Health Care
55	256	Parker-Hannifin	12.76	Industrials
56	67	Morgan Stanley	12.74	Financials
57	89	Nike	12.67	Apparel
58	30	Microsoft	12.65	Technology
59	46	Intel	12.65	Technology
60	432	NCR	12.61	Technology
61	184	Colgate-Palmolive	12.60	Household Products
62	101	Capital One Financial	12.57	Financials
63	443	Motorola Solutions	12.57	Technology
64	163	Kimberly-Clark	12.54	Household Products
65	24	Bank of America Corp.	12.52	Financial
66	82	Oracle	12.51	Technology
67	124	International Paper	12.48	Materials
68	259	State Street Corp.	12.46	Financials
69	210	Principal Financial	12.46	Financials
70	140	Whirlpool	12.44	Industrials
71	417	Insight Enterprises	12.41	Wholesale

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
72	50	FedEx	12.40	Transportation
73	137	Aflac	12.35	Financials
74	45	PepsiCo	12.35	Food, Beverages and Tobacco
75	144	Thermo Fisher Scientific	12.28	Technology
76	102	Deere	12.25	Industrials
77	304	IQVIA Holdings	12.25	Health Care
78	483	First American Financial	12.23	Financials
79	65	Caterpillar	12.22	Industrials
80	164	AECOM	12.21	Engineering Construction
81	29	Anthem	12.16	Health Care
82	131	McDonald's	12.13	Hotels, Restaurants and Leisure
83	445	Rockwell Automation	12.08	Industrials
84	73	Cigna	12.06	Health Care
85	32	Citigroup	12.03	Financial
86	240	Stryker	11.94	Health Care
87	126	Southern	11.93	Energy
88	49	Aetna	11.93	Health Care
89	291	Xerox	11.93	Technology
90	20	J.P. Morgan Chase	11.91	Financial
91	201	Applied Materials	11.86	Technology
92	175	Bank of New York Mellon Corp.	11.84	Financials
93	276	L3 Technologies	11.84	Aerospace & Defense
94	388	National Oilwell Varco	11.83	Energy
95	208	Textron	11.83	Aerospace & Defense
96	215	Ecolab	11.80	Chemicals
97	202	Waste Management	11.79	Business Services
98	149	Cummins	11.78	Industrials
99	274	Energy	11.77	Energy
100	71	American Airlines Group	11.76	Transportation
101	112	Progressive	11.73	Financials
102	75	Delta Air Lines	11.70	Transportation
103	62	Cisco Systems	11.70	Technology
104	147	Tenet Healthcare	11.60	Health Care
105	6	McKesson	11.60	Health Care
106	176	Freeport-McMoRan	11.58	Energy
107	191	PPG Industries	11.57	Chemicals
108	166	CenturyLink	11.56	Telecom
109	486	Northern Trust	11.54	Financials

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
110	23	Home Depot	11.50	Retail
111	52	Prudential Financial	11.45	Financial
112	214	AES	11.43	Energy
113	485	Avon Products	11.43	Household Products
114	14	Cardinal Health	11.38	Health Care
115	132	Starbucks	11.37	Hotels, Restaurants and Leisure
116	303	SunTrust Banks	11.35	Financials
117	293	Corning	11.34	Technology
118	87	Coca-Cola	11.32	Food, Beverages and Tobacco
119	81	United Continental Holdings	11.31	Transportation
120	125	Duke Energy	11.29	Energy
121	128	Avnet	11.27	Wholesale
122	407	Harris	11.27	Aerospace & Defense
123	189	CDW	11.25	Technology
124	251	Becton Dickinson	11.23	Health Care
125	262	Alcoa	11.22	Materials
126	187	Goodyear Tire & Rubber	11.21	Motor Vehicles
127	130	Amgen	11.21	Health Care
128	44	UPS	11.20	Transportation
129	69	New York Life Insurance	11.09	Financials
130	295	Expedia	11.07	Technology
131	1	Walmart	11.05	Retail
132	86	American Express	11.04	Financials
133	347	AGCO	11.02	Industrials
134	254	First Data	11.01	Business Services
135	192	Texas Instruments	10.95	Technology
136	233	Dominion Resources	10.95	Energy
137	122	U.S. Bancorp	10.94	Financials
138	114	Kraft Heinz	10.92	Food, Beverages and Tobacco
139	168	PG&E Corp.	10.88	Energy
140	309	eBay	10.88	Technology
141	159	Jabil Circuit	10.87	Technology
142	237	BlackRock	10.84	Financials
143	409	Discovery	10.84	Media
144	55	Disney	10.84	Media
145	48	Archer Daniels Midland	10.81	Food, Beverages and Tobacco
146	424	United Rentals	10.78	Business Services
147	275	Molson Coors Brewing	10.78	Food, Beverages and Tobacco

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
148	427	Avery Dennison	10.76	Materials
149	431	Raymond James Financial	10.73	Financials
150	440	Assurant	10.73	Financials
151	495	NetApp	10.72	Technology
152	357	Anixter International	10.67	Wholesale
153	56	Humana	10.65	Health Care
154	310	Eastman Chemical	10.65	Chemicals
155	500	Cintas	10.62	Business Services
156	235	J.C. Penney	10.61	Retail
157	406	R.R. Donnelley & Sons	10.60	Media
158	148	Lear	10.56	Motor Vehicles
159	330	Charles Schwab	10.55	Financials
160	460	Regions Financial	10.55	Financials
161	366	Fifth Third Bancorp	10.54	Financials
162	415	Rockwell Collins	10.54	Aerospace & Defense
163	376	Jones Financial	10.54	Financials
164	138	AutoNation	10.50	Retail
165	95	ConocoPhillips	10.50	Energy
166	100	USAA	10.48	Financials
167	456	Sealed Air	10.47	Materials
168	39	Target	10.47	Retail
169	68	Liberty Mutual Insurance Group	10.45	Financials
170	255	Consolidated Edison	10.43	Energy
171	222	PayPal Holdings	10.43	Business Services
172	411	Sanmina	10.43	Technology
173	106	Travelers Cos.	10.41	Financials
174	17	Kroger	10.40	Food and Drug Stores
175	220	Occidental Petroleum	10.38	Energy
176	165	PNC Financial Services Group	10.38	Financials
177	422	Spectrum Brands Holdings	10.37	Household Products
178	185	American Electric Power	10.37	Energy
179	15	Costco	10.33	Retail
180	302	Fidelity National Financial	10.33	Financials
181	454	Arthur J. Gallagher	10.33	Financials
182	182	General Mills	10.32	Food, Beverages and Tobacco
183	277	Ball	10.30	Materials
184	348	Genworth Financial	10.29	Financials
185	200	Aramark	10.28	Business Services

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
186	113	Arrow Electronics	10.28	Wholesale
187	120	Macy's	10.26	Retail
188	467	M&T Bank Corp.	10.26	Financials
189	205	Lincoln National	10.25	Financials
190	408	Expeditors International of Washington	10.25	Transportation
191	339	Peter Kiewit Sons'	10.23	Engineering Construction
192	8	Amazon.com	10.22	Technology
193	190	Sherwin-Williams	10.20	Chemicals
194	156	Hartford Financial Services Group	10.19	Financials
195	487	Fiserv	10.18	Business Services
196	183	Nordstrom	10.17	Retail
197	335	Hertz Global Holdings	10.16	Retail
198	133	Qualcomm	10.15	Technology
199	402	JetBlue Airways	10.14	Transportation
200	239	Guardian Life Ins. Co. of America	10.10	Financials
201	353	Williams	10.09	Energy
202	475	Magellan Health	10.06	Health Care
203	296	Republic Services	10.05	Business Services
204	181	Gap	10.02	Retail
205	290	Live Nation Entertainment	9.98	Media
206	393	Dana Holding	9.93	Motor Vehicles
207	442	Owens Corning	9.92	Materials
208	308	CenterPoint Energy	9.89	Energy
209	80	Tyson Foods	9.88	Food, Beverages and Tobacco
210	282	Huntsman	9.88	Chemicals
211	242	VF	9.87	Apparel
212	193	C.H. Robinson Worldwide	9.87	Transportation
213	430	HD Supply Holdings	9.87	Wholesale
214	7	CVS Health	9.85	Food and Drug Stores
215	345	Air Products & Chemicals	9.79	Chemicals
216	236	MasterCard	9.78	Business Services
217	25	Express Scripts Holding	9.78	Health Care
218	195	Cognizant Technology Solutions	9.78	Technology
219	85	TJX	9.73	Retail
220	179	DaVita HealthCare Partners	9.73	Health Care
221	264	Praxair	9.72	Chemicals
222	258	Estee Lauder	9.69	Household Products
223	416	Kindred Healthcare	9.67	Health Care

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
224	387	Ryder System	9.66	Transportation
225	350	News Corp.	9.63	Media
226	394	Weyerhaeuser	9.62	Materials
227	401	Activision Blizzard	9.62	Technology
228	389	Adobe Systems	9.61	Technology
229	382	Mosaic	9.61	Chemicals
230	109	Twenty-First Century Fox	9.60	Media
231	161	Visa	9.58	Business Services
232	494	Western Union	9.56	Business Services
233	281	Office Depot	9.55	Retail
234	53	Albertsons	9.54	Food and Drug Stores
235	197	CBS	9.52	Media
236	141	Union Pacific	9.52	Transportation
237	150	Micron Technology	9.50	Technology
238	379	Hershey	9.47	Food, Beverages and Tobacco
239	230	Lennar	9.46	Engineering Construction
240	472	Yum Brands	9.46	Hotels, Restaurants and Leisure
241	218	Kinder Morgan	9.45	Energy
242	92	Exelon	9.43	Energy
243	261	Netflix	9.41	Technology
244	84	TIAA	9.40	Financials
245	284	Norfolk Southern	9.39	Transportation
246	429	CMS Energy	9.39	Energy
247	21	Fannie Mae	9.38	Financial
248	229	Booking Holdings	9.36	Technology
249	287	W.W. Grainger	9.35	Wholesale
250	286	Laboratory Corp. of America	9.34	Health Care
251	19	Walgreens Boots Alliance	9.33	Food and Drug Stores
252	288	Qurate Retail	9.31	Retail
253	232	DTE Energy	9.31	Energy
254	54	Sysco	9.31	Wholesale
255	426	Graybar Electric	9.28	Wholesale
256	327	Public Service Enterprise Group	9.28	Energy
257	361	Zimmer Biomet Holdings	9.25	Health Care
258	219	FirstEnergy	9.24	Energy
259	265	CSX	9.22	Transportation
260	398	Blackstone Group	9.20	Financials
261	104	Northwestern Mutual	9.19	Financials

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
262	338	Crown Holdings	9.17	Materials
263	453	Ameren	9.16	Energy
264	213	Devon Energy	9.15	Energy
265	340	Dick's Sporting Goods	9.15	Retail
266	285	salesforce.com	9.15	Technology
267	337	Mutual of Omaha Insurance	9.14	Financials
268	343	Thrivent Financial for Lutherans	9.14	Financials
269	160	Community Health Systems	9.13	Food, Beverages and Tobacco
270	263	Discover Financial Services	9.10	Financials
271	355	Alaska Air Group	9.08	Transportation
272	108	Philip Morris International	9.08	Tobacco
273	143	ManpowerGroup	9.05	Business Services
274	289	Autoliv	9.05	Motor Vehicles
275	479	Wyndham Destinations	9.05	Hotels, Restaurants and Leisure
276	257	Anadarko Petroleum	9.05	Energy
277	279	Murphy USA	9.05	Retail
278	468	Clorox	9.01	Household Products
279	151	Nucor	9.01	Materials
280	492	ON Semiconductor	8.98	Technology
281	268	Universal Health Services	8.98	Health Care
282	180	Supervalu	8.98	Food and Drug Stores
283	321	ConAgra Foods	8.93	Food, Beverages and Tobacco
284	98	Time Warner	8.91	Media
285	116	Gilead Sciences	8.90	Health Care
286	367	Quest Diagnostics	8.87	Health Care
287	61	Centene	8.87	Health Care
288	438	Apache	8.85	Energy
289	246	United States Steel	8.83	Materials
290	435	Citizens Financial Group	8.82	Financials
291	270	EOG Resources	8.78	Energy
292	278	AutoZone	8.75	Retail
293	38	Freddie Mac	8.73	Financial
294	410	Owens-Illinois	8.70	Materials
295	342	Navistar International	8.69	Motor Vehicles
296	378	Erie Insurance Group	8.69	Financials
297	322	GameStop	8.68	Retail
298	31	Valero Energy	8.63	Energy
299	385	Newmont Mining	8.63	Energy

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
300	267	Unum Group	8.60	Financials
301	301	BorgWarner	8.60	Motor Vehicles
302	383	J.M. Smucker	8.59	Food, Beverages and Tobacco
303	105	Enterprise Products Partners	8.57	Energy
304	380	PPL	8.56	Energy
305	313	Pacific Life	8.55	Financials
306	93	Massachusetts Mutual Life Insurance	8.53	Financials
307	152	Molina Healthcare	8.51	Health Care
308	196	Newell Brands	8.49	Household Products
309	405	Spirit AeroSystems Holdings	8.49	Aerospace & Defense
310	341	PulteGroup	8.47	Engineering Construction
311	326	Fidelity National Information Services	8.45	Business Services
312	139	Penske Automotive Group	8.45	Retail
313	238	Henry Schein	8.41	Health Care
314	488	Harley-Davidson	8.41	Transportation
315	365	Alliance Data Systems	8.38	Business Services
316	117	Mondelez International	8.37	Food, Beverages and Tobacco
317	228	Stanley Black & Decker	8.36	Household Products
318	90	Andeavor	8.35	Energy
319	188	Omnicom Group	8.33	Business Services
320	157	Kohl's	8.33	Retail
321	470	KKR	8.33	Financials
322	123	Dollar General	8.30	Retail
323	209	Ross Stores	8.29	Retail
324	455	Celanese	8.28	Chemicals
325	241	Jefferies Financial Group	8.27	Financials
326	314	Chesapeake Energy	8.25	Energy
327	418	Dr Pepper Snapple Group	8.25	Food, Beverages and Tobacco
328	155	Paccar	8.25	Motor Vehicles
329	299	Ally Financial	8.24	Financials
330	3	Berkshire Hathaway	8.23	Financial
331	358	Campbell Soup	8.23	Food, Beverages and Tobacco
332	266	Xcel Energy	8.23	Energy
333	306	Nvidia	8.21	Technology
334	396	Darden Restaurants	8.21	Hotels, Restaurants and Leisure
335	315	Mohawk Industries	8.20	Household Products
336	249	Oneok	8.19	Energy
337	323	Hormel Foods	8.18	Food, Beverages and Tobacco

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
338	211	D.R. Horton	8.14	Engineering Construction
339	224	Celgene	8.13	Health Care
340	493	Simon Property Group	8.12	Financials
341	490	Patterson	8.09	Wholesale
342	449	American Axle & Manufacturing	8.08	Motor Vehicles
343	83	Tech Data	8.07	Wholesale
344	269	NRG Energy	8.05	Energy
345	96	CHS	8.04	Food, Beverages and Tobacco
346	248	Bed Bath & Beyond	8.01	Retail
347	88	Publix Super Markets	8.01	Food and Drug Stores
348	390	LifePoint Health	8.00	Health Care
349	359	Interpublic Group	7.97	Business Services
350	491	Peabody Energy	7.96	Energy
351	498	ABM Industries	7.95	Business Services
352	227	Las Vegas Sands	7.93	Hotels, Restaurants and Leisure
353	170	WellCare Health Plans	7.93	Health Care
354	484	Cincinnati Financial	7.92	Financials
355	94	Rite Aid	7.91	Food and Drug Stores
356	317	Advance Auto Parts	7.90	Retail
357	329	O'Reilly Automotive	7.88	Retail
358	444	NVR	7.88	Engineering Construction
359	320	Tenneco	7.87	Motor Vehicles
360	395	J.B. Hunt Transport Services	7.84	Transportation
361	497	Pioneer Natural Resources	7.84	Energy
362	463	S&P Global	7.83	Business Services
363	362	Dean Foods	7.82	Food, Beverages and Tobacco
364	107	Hewlett Packard Enterprise	7.82	Technology
365	336	Calpine	7.81	Energy
366	370	WESCO International	7.80	Wholesale
367	399	Berry Global Group	7.78	Materials
368	436	Packaging Corp. of America	7.72	Materials
369	12	AmerisourceBergen	7.69	Health Care
370	368	EMCOR Group	7.69	Engineering Construction
371	473	Regeneron Pharmaceuticals	7.68	Health Care
372	169	Synnex	7.67	Wholesale
373	154	Altria Group	7.66	Food, Beverages and Tobacco
374	318	Owens & Minor	7.65	Health Care
375	136	Icahn Enterprises	7.62	Financials

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
376	172	Sears Holdings	7.61	Retail
377	319	United Natural Foods	7.60	Wholesale
378	171	Performance Food Group	7.60	Wholesale
379	41	Marathon Petroleum	7.59	Energy
380	177	Genuine Parts	7.57	Wholesale
381	174	CarMax	7.55	Retail
382	425	Casey's General Stores	7.55	Retail
383	412	KeyCorp	7.49	Financials
384	121	US Foods Holding	7.47	Wholesale
385	280	MGM Resorts International	7.42	Hotels, Restaurants and Leisure
386	372	WEC Energy Group	7.41	Energy
387	332	PVH	7.40	Apparel
388	300	LKQ	7.37	Wholesale
389	464	Markel	7.37	Financials
390	400	Builders FirstSource	7.37	Materials
391	363	Foot Locker	7.35	Retail
392	428	MasTec	7.32	Engineering Construction
393	294	Lithia Motors	7.31	Retail
394	423	Ascena Retail Group	7.30	Retail
395	462	Securian Financial Group	7.25	Financials
396	110	AbbVie	7.20	Health Care
397	352	Westlake Chemical	7.19	Chemicals
398	421	Ralph Lauren	7.19	Apparel
399	234	Reinsurance Group of America	7.17	Financials
400	344	DCP Midstream	7.15	Energy
401	198	Envision Healthcare Holdings	7.14	Health Care
402	459	Burlington Stores	7.13	Retail
403	212	Marsh & McLennan	7.11	Financials
404	142	Southwest Airlines	7.10	Transportation
405	204	Illinois Tool Works	7.09	Industrials
406	216	Land O'Lakes	7.08	Food, Beverages and Tobacco
407	354	Lam Research	7.08	Technology
408	448	Olin	7.07	Chemicals
409	364	Eversource Energy	7.07	Energy
410	221	Viacom	7.03	Media
411	97	3M	7.01	Industrials
412	271	Sempra Energy	6.97	Energy
413	260	Tesla	6.95	Motor Vehicles

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
414	334	Targa Resources	6.95	Energy
415	273	Group 1 Automotive	6.94	Retail
416	489	Cheniere Energy	6.94	Energy
417	64	Energy Transfer Equity	6.92	Energy
418	419	American Tower	6.86	Financials
419	458	Realogy Holdings	6.82	Financials
420	253	Farmers Insurance Exchange	6.82	Financials
421	447	Wynn Resorts	6.80	Hotels, Restaurants and Leisure
422	469	AmTrust Financial Services	6.78	Financials
423	375	Auto-Owners Insurance	6.77	Financials
424	134	Dollar Tree	6.75	Retail
425	203	DISH Network	6.74	Telecom
426	351	SpartanNash	6.60	Wholesale
427	461	AK Steel Holding	6.58	Materials
428	91	World Fuel Services	6.57	Wholesale
429	115	Plains GP Holdings	6.56	Energy
430	478	Ingredion	6.53	Food, Beverages and Tobacco
431	247	Core-Mark Holding	6.45	Wholesale
432	333	Avis Budget Group	6.43	Retail
433	231	L Brands	6.42	Retail
434	167	NextEra Energy	6.42	Energy
435	437	Alleghany	6.39	Financials
436	391	Tractor Supply	6.38	Retail
437	206	HollyFrontier	6.34	Energy
438	465	TravelCenters of America	6.33	Retail
439	476	Western & Southern Financial Group	6.22	Financials
440	162	Danaher	6.17	Technology
441	471	Ulta Beauty	6.17	Retail
442	369	W.R. Berkley	6.06	Financials
443	298	Sonic Automotive	6.04	Retail
444	386	Constellation Brands	6.01	Food, Beverages and Tobacco
445	457	UGI	5.95	Energy
446	312	Steel Dynamics	5.77	Materials
447	477	Intercontinental Exchange	5.74	Financials
448	305	Reliance Steel & Aluminum	5.72	Materials
449	496	Polaris Industries	5.69	Energy
450	250	BB&T Corp.	5.64	Financials
451	377	Liberty Media	5.61	Media

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
452	40	Lowe's	5.59	Retail
453	217	Loews	5.59	Financials
454	481	Seaboard	5.58	Food, Beverages and Tobacco
455	316	Quanta Services	5.56	Engineering Construction
456	135	PBF Energy	5.53	Energy
457	441	Franklin Resources	5.53	Financials
458	226	Kellogg	5.52	Food, Beverages and Tobacco
459	118	Northrop Grumman	5.50	Aerospace & Defense
460	99	General Dynamics	5.48	Aerospace & Defense
461	103	INTL FCStone	5.45	Financials
462	245	Biogen	5.40	Health Care
463	413	American Financial Group	5.39	Financials
464	331	Global Partners	5.21	Wholesale
465	392	Thor Industries	5.16	Motor Vehicles
466	434	Asbury Automotive Group	5.11	Retail
467	186	XPO Logistics	5.09	Transportation
468	194	WestRock	5.05	Materials
469	439	Dillard's	5.03	Retail
470	349	Univar	4.99	Wholesale
471	28	Phillips 66	4.98	Energy
472	360	Dover	4.93	Industrials
473	272	Toys "R" Us	4.82	Retail
474	480	Toll Brothers	4.82	Engineering Construction
475	482	Booz Allen Hamilton Holding	4.73	Technology
476	373	Masco	4.64	Household Products
477	433	Hanesbrands	4.60	Apparel
478	307	Voya Financial	4.56	Financials
479	450	Old Republic International	4.43	Financials
480	452	iHeartMedia	4.39	Media
481	446	TreeHouse Foods	4.39	Food, Beverages and Tobacco
482	403	Amphenol	4.26	Technology
483	252	Ameriprise Financial	4.25	Financials
484	244	Edison International	4.13	Energy
485	173	Synchrony Financial	3.95	Financials
486	346	Veritiv	3.37	Wholesale
487	381	Huntington Ingalls Industries	3.37	Aerospace & Defense
488	384	Delek US Holdings	3.37	Energy
489	371	Coty	3.22	Household Products

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Darknet Rank	Fortune 500 Rank	Company	2019 score	Sector
490	451	Chemours	3.18	Chemicals
491	223	NGL Energy Partners	3.14	Wholesale
492	414	Oshkosh	2.89	Motor Vehicles
493	404	A-Mark Precious Metals	2.77	Materials
494	5	UnitedHealth Group	2.56	Health Care
495	328	Boston Scientific	2.48	Health Care
496	466	Conduent	2.08	Business Services
497	225	Arconic	1.59	Materials
498	420	Fortive	0.69	Industrials
499	397	Yum China Holdings	0.00	Hotels, Restaurants and Leisure
500	499	Vistra Energy	0.00	Energy

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