

2023 Pharmaceutical Industry Cybersecurity Report

Overview

Managing the risk of cyber threats and reducing the impact of breaches should be a top priority for organisations of all sizes, from small businesses and start-ups to large corporations.

To assess how well companies within the pharmaceutical industry are managing their cybersecurity risk and to compare the changes in the industry's security posture since our [2022 Pharmaceutical Industry Cybersecurity Snapshot](#), we carried out a risk assessment of the **top 100 Pharmaceutical companies** by revenue from September 2022 to September 2023.

The report includes findings across several cyber risk factors, including application, network, database and email security, encryption configuration and evidence of malware.

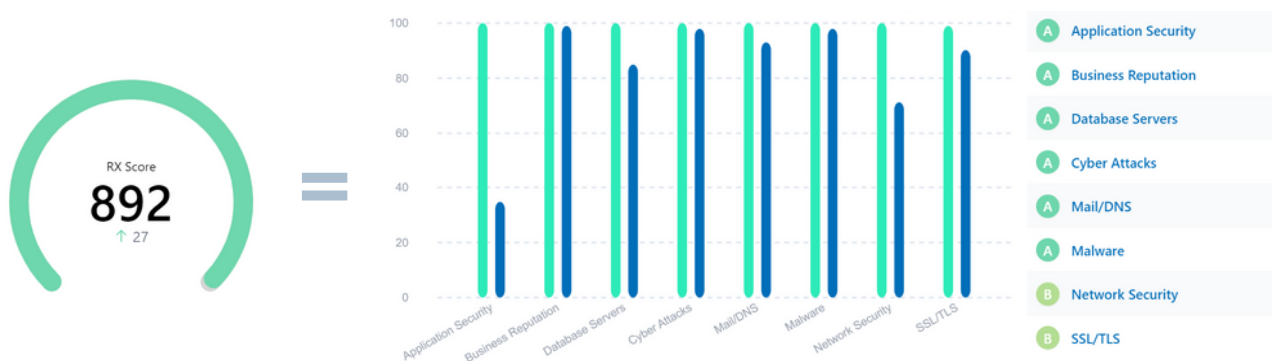
This report will paint a clear picture of Pharmaceutical companies' current cyber security state. It will be a valuable resource to help you understand how organisations within the industry manage cyber risk.

Key Findings:

- Almost **50%** of security issues identified are **application security issues**.
- **78%** of companies suffer from critical encryption issues, a staggering 51% increase since last year, which increases the risk of Man-in-the-Middle (MitM) Attacks and potentially **exposes sensitive information** to attackers.
- The **average cybersecurity score** was 749/900, but some organisations scored as low as 636. An organisation with a score as low as this has a higher risk of a large and costly security breach within the next 12 months.
- 80% of companies have their applications open to at least 3 different **CVEs with a CVSS Score of 6.1 or higher**.

How RiskXchange Calculates Cybersecurity Scores

RiskXchange cybersecurity score provides insights and detailed analysis of an organisation's current cybersecurity posture. The total score ranges between **300 and 900** and is calculated as a percentage of each attack vector across eight categories, graded between A-F. Individual attack vector grades are calculated based on the severity, type and quantity of security issues or findings associated with the attack vector.



The score conveys an overall real-time assessment of an organisation's cybersecurity state and provides a means for objectively monitoring and assessing whether an organisation's security posture is improving or declining over time.

You can compare cybersecurity ratings to financial credit ratings. As a poor credit rating is associated with a greater probability of default, a poor cybersecurity rating is associated with a higher likelihood of sustaining a data breach or another adverse cyber event.

The Ever-Increasing Threats to Pharmaceutical Industry

Third-Party Vendors

Many pharmaceutical companies rely on services from third-party vendors to carry out daily operations, if any third party were to experience a data breach, your organisation would be affected. In 2023, the average total cost of a data breach in the pharmaceutical industry was \$4.82 million, according to [IBM's 2023 report](#). Pharmaceuticals are the 3rd costliest industry when it comes to data breaches.

Ransomware

Ransomware attacks make organisations incur great losses and may cause organisations to close permanently. The 2021 [Ransomware Trends in Pharmaceutical Supply Chains](#) report suggests 1 in 10 global pharmaceutical manufacturers are at a high risk of suffering a ransomware attack.

Phishing Attacks

The frequency of phishing attacks - or fraudulent attempts to access critical information by posing as a trusted source or entity - is rising. Phishing was the number 1 attack vector in 2023 and the second costliest cyberattack at \$4.76 million, [according to IBM](#).

The Internet of Things and AI

The pharmaceutical industry has embraced the Internet of Things (IoT) - a system of interrelated computing devices and digital machines that can communicate and transfer data across a network, which creates an expanded cyberattack surface. With the rise of AI in recent years, threat actors are finding it easier than ever to breach an insecure network and get a hold of valuable data.

Employee error or negligence

Employees are a major driver of data breaches across nearly all industries. The 2023 [Data Breach Investigations Report](#) by Verizon states that 74% of all breaches include some form of a human element: human error, stolen credentials, or social engineering.



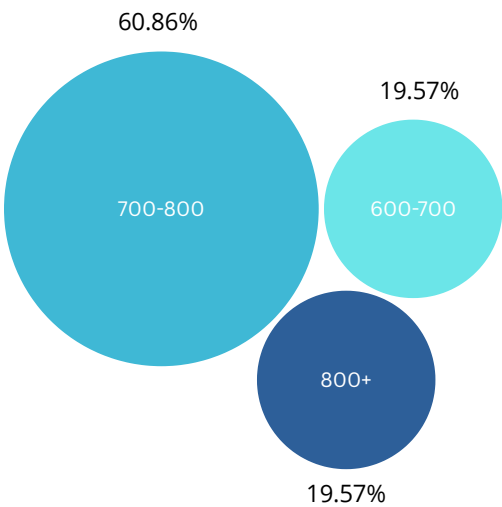
Security Score Performance

Summary of Security Score Performance



The security scores ranged between 636 and 869, with the highest score reached by a single organisation and most companies falling under 800. Overall, there is a positive change compared to last year's results. The average score among the companies went up by 4 points, and we see more organisations with 800+ scores.

Security Score Distribution

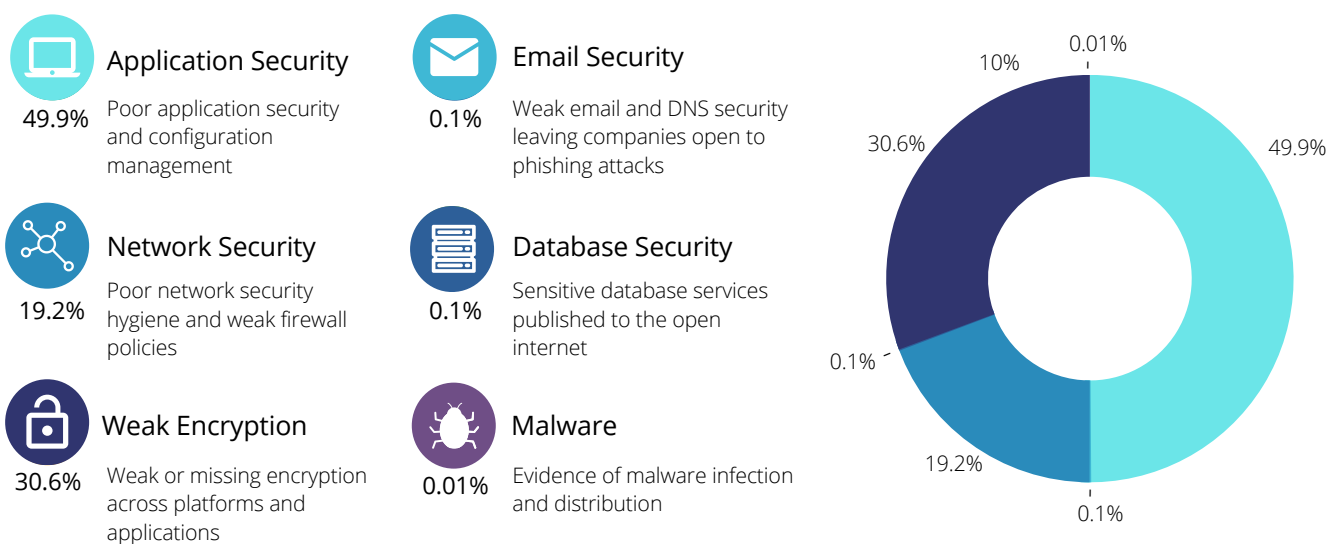


The security score distribution revealed that companies with lower scores between 600-700 and those with the highest scores above 800 have an equal distribution of 19.57%.

Although no company falls under 600, over 60% of the companies with a rating between 700-800 were still found to have medium and high-risk vulnerabilities and one critical, showcasing the need for improving their cybersecurity posture.

The Cyber State of the Pharmaceutical Industry

Critical and High Security Issues Distribution

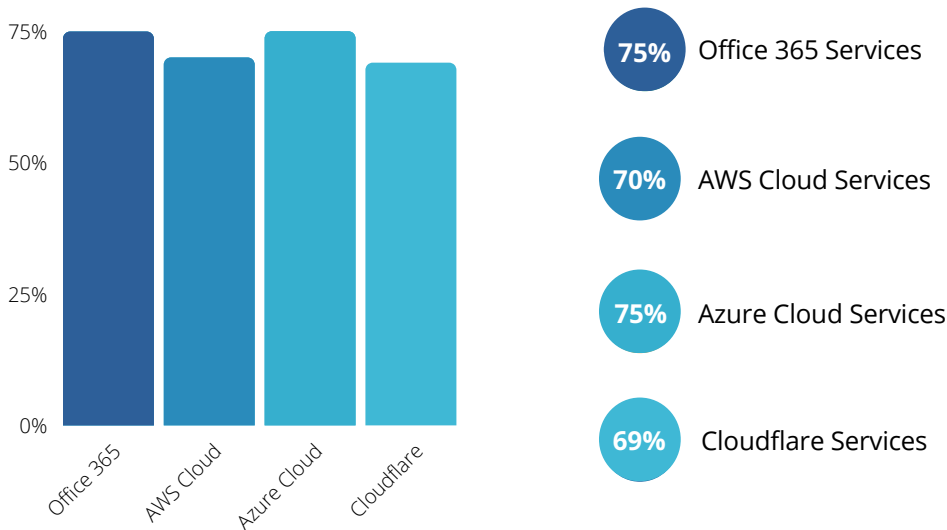


The security issues distribution shows that most of the pharmaceutical industry's risks are caused by poor application security, where almost **50% of all issues identified** fall under that category, a 16% increase since last year. Weak or missing encryption is the 2nd most prominent issue, totalling over 30% of all found security risks, a 20% increase since last year. What's more, **78% of all companies have been found to have critical SSL/TLS encryption issues**, opening doors to Man-in-the-Middle (MitM) Attacks and increasing the risk of their valuable data being exposed.

Meanwhile, the network security issues count has decreased by 15% compared to the 2022 results. Email security and database issues have dropped by 4% and 14%, respectively. Although already low, Malware evidence, standing at 1% in 2022, now accounts for just 0.01% of all issues identified.

Top Service Providers











































Summary of Top Service Providers Used



























































































When looking at the distribution of which service providers are being used among these pharmaceutical companies, we can see that 75% of them use Office 365 Services, as well as Azura Cloud, with AWS and Cloudflare following not far behind. This highlights that many companies rely heavily on third-party providers and need to think about how they can secure their assets in case one of their providers gets breached.













































In 2023, 82% of all breaches involved the data stored in the cloud. What's more, cloud environment attacks often included threat actors gaining access to multiple environments, with 39% of breaches spanning across multiple environments, states IBM's 2023 [Cost of Data Breach Report](#).



















Full List of Companies Studied

Company	Score	Location	Industry
 AbbVie	● 705 -	 Switzerland	Science & Pharmaceuticals
 Abdi Ibrahim Pharmaceuticals	● 781 -	 Turkey	Science & Pharmaceuticals
 Accord Healthcare	● 813 -	 Ireland	Science & Pharmaceuticals
 Acino	● 869 -	 Switzerland	Science & Pharmaceuticals
 ALK	● 742 -	 Denmark	Science & Pharmaceuticals
 Allergan	● 709 →	 Ireland	Science & Pharmaceuticals
 Alliance Healthcare	● 666 -	 United Kingdom	Science & Pharmaceuticals
 Almac Group	● 803 -	 United Kingdom	Science & Pharmaceuticals
 Almirall	● 687 -	 Spain	Science & Pharmaceuticals
 Amneal Pharmaceuticals	● 775 -	 United States of America	Science & Pharmaceuticals
 Apotex Inc.	● 798 -	 Canada	Science & Pharmaceuticals
 Astellas Pharma US	● 811 -	 United States of America	Science & Pharmaceuticals
 AstraZeneca	● 734 →	 United Kingdom	Science & Pharmaceuticals
 Bausch + Lomb	● 735 -	 Canada	Science & Pharmaceuticals
 Bausch Health Companies Inc.	● 754 -	 Canada	Science & Pharmaceuticals
 Bioclinica	● 751 -	 Romania	Science & Pharmaceuticals
 Biolab Pharma	● 0 -	 Brazil	Healthcare
 Boehringer Ingelheim	● 719 →	 Germany	Science & Pharmaceuticals
 Bracco	● 666 -	 Italy	Science & Pharmaceuticals
 Bristol Myers Squibb	● 714 -	 United States of America	Science & Pharmaceuticals
 CALYX	● 841 -	 United Kingdom	Science & Pharmaceuticals

Company	Score	Location	Industry
 Catalent Pharma Solutions	● 779 -	 United States of America	Science & Pharmaceuticals
 Celgene	● 817 →	 United States of America	Science & Pharmaceuticals
 Centrient Pharmaceuticals	● 703 -	 Netherlands	Science & Pharmaceuticals
 CEVA	● 743 -	 France	Science & Pharmaceuticals
 Chiesi Group	● 676 -	 Italy	Science & Pharmaceuticals
 Cipla	● 735 -	 India	Science & Pharmaceuticals
 Curia (formerly AMRI)	● 712 -	 United States of America	Science & Pharmaceuticals
 Daiichi Sankyo, Inc.	● 717 -	 Japan	Science & Pharmaceuticals
 DEVA Holding	● 742 -	 Turkey	Science & Pharmaceuticals
 Dr. Reddy's Laboratories	● 797 -	 India	Science & Pharmaceuticals
 Eisai US	● 807 -	 Japan	Science & Pharmaceuticals
 Elanco	● 766 -	 United States of America	Science & Pharmaceuticals
 Eli Lilly and Company	● 659 ↓	 United States of America	Science & Pharmaceuticals
 Endo International plc	● 779 -	 United States of America	Science & Pharmaceuticals
 EVERSANA	● 743 -	 United States of America	Science & Pharmaceuticals
 Evotec	● 640 -	 Germany	Science & Pharmaceuticals
 Ferrer	● 696 -	 Spain	Science & Pharmaceuticals
 Ferring Pharmaceuticals	● 642 -	 Switzerland	Science & Pharmaceuticals
 Fresenius Kabi	● 723 -	 Germany	Science & Pharmaceuticals
 Galderma	● 752 -	 Switzerland	Science & Pharmaceuticals
 Grifols	● 722 -	 Spain	Science & Pharmaceuticals
 GSK	● 777 ↓	 United Kingdom	Science & Pharmaceuticals

Company	Score	Location	Industry
 Guerbet	● 680 -	 France	Healthcare
 Hikma Pharmaceuticals	● 0 -	 United Kingdom	Healthcare
 Hovione	● 805 -	 Portugal	Science & Pharmaceuticals
 Incyte	● 824 -	 United States of America	Science & Pharmaceuticals
 Ipsen	● 659 -	 France	Science & Pharmaceuticals
 Jazz Pharma	● 715 ↑	 Ireland	Science & Pharmaceuticals
 LEO Pharma	● 721 -	 Denmark	Science & Pharmaceuticals
 Lundbeck	● 729 -	 Denmark	Science & Pharmaceuticals
 Mallinckrodt Pharmaceuticals	● 636 -	 United States of America	Science & Pharmaceuticals
 Medpace	● 825 -	 United States of America	Science & Pharmaceuticals
 MENARINI Group	● 712 -	 Italy	Science & Pharmaceuticals
 Merck	● 739 →	 United States of America	Science & Pharmaceuticals
 Merck Group	● 652 -	 Germany	Science & Pharmaceuticals
 MSD	● 713 ↑	 United States of America	Science & Pharmaceuticals
 Mundipharma	● 0 -	 United Kingdom	Healthcare
 Mylan	● 833 -	 United States of America	Science & Pharmaceuticals
 Novartis	● 673 ↓	 Switzerland	Science & Pharmaceuticals
 NOVAVAX INC	● 707 -	 United States of America	Science & Pharmaceuticals
 Novo Nordisk	● 716 ↑	 Denmark	Science & Pharmaceuticals
 Octapharma	● 829 -	 Switzerland	Science & Pharmaceuticals
 Organon	● 799 -	 United States of America	Science & Pharmaceuticals
 Orifarm	● 773 -	 Denmark	Science & Pharmaceuticals

Company	Score	Location	Industry
 Orion Corporation	817 -	 Finland	Science & Pharmaceuticals
 Parexel	655 -	 United States of America	Science & Pharmaceuticals
 Pfizer	724 →	 United States of America	Science & Pharmaceuticals
 PharmaLex	813 -	 Germany	Science & Pharmaceuticals
 Pierre Fabre Group	0 -	 France	Healthcare
 Polpharma	680 -	 Poland	Science & Pharmaceuticals
 PSI CRO AG	754 -	 Switzerland	Science & Pharmaceuticals
 Recipharm	826 -	 Sweden	Science & Pharmaceuticals
 Sandoz	778 -	 Switzerland	Science & Pharmaceuticals
 Sanofi	740 →	 France	Science & Pharmaceuticals
 Santen	837 -	 Japan	Science & Pharmaceuticals
 Servier	788 -	 France	Science & Pharmaceuticals
 Signant Health	807 -	 United States of America	Science & Pharmaceuticals
 Sobi - Swedish Orphan Biovitrum AB (publ)	685 -	 Sweden	Science & Pharmaceuticals
 STADA Group	758 -	 Germany	Science & Pharmaceuticals
 SUN PHARMA	707 -	 India	Science & Pharmaceuticals
 Sunovion Pharmaceuticals	754 -	 United States of America	Science & Pharmaceuticals
 Synthon	830 -	 Netherlands	Science & Pharmaceuticals
 Takeda	766 →	 Japan	Science & Pharmaceuticals
 Teva Pharmaceuticals	824 →	 Israel	Science & Pharmaceuticals
 The Janssen Pharmaceutical Companies of Johnson & Johnson	681 -	 United States of America	Science & Pharmaceuticals
 UCB	805 -	 Belgium	Science & Pharmaceuticals

Company	Score	Location	Industry
 Vifor Pharma	● 798 -	 Germany	Science & Pharmaceuticals
 Virbac	● 689 -	 France	Science & Pharmaceuticals
 Walgreens Boots Alliance	● 677 -	 United States of America	Science & Pharmaceuticals
 West Pharmaceutical Services	● 782 -	 United States of America	Science & Pharmaceuticals
 WuXi Biologics	● 795 -	 China	Science & Pharmaceuticals
 Xellia Pharmaceuticals	● 846 -	 Denmark	Science & Pharmaceuticals
 Zambon	● 765 -	 Italy	Science & Pharmaceuticals
 Zentiva	● 745 -	 Czechia	Science & Pharmaceuticals
 Zoetis	● 799 -	 United States of America	Science & Pharmaceuticals

About RiskXchange

RiskXchange is a leading cybersecurity service provider that helps companies of all sizes discover, continuously monitor, and reduce cyber risks across their enterprise’s attack surface and supply chain. RiskXchange’s AI-assisted platform offers multiple critical data points from a broad range of risk categories, including application security, malware, patching cadence, network security, data breaches, email security, and leaked information, among others. Updated every 24 hours, the passive data collection methods let you regularly monitor and mitigate risks to prevent costly cyberattacks.

In 2021 the company won a 'Security Solution of the Year' award at the European IT and Software Excellence Awards for its outstanding security solutions.

To receive your company's complimentary Security Score and get a Free Trial of the RiskXchange platform, please visit www.riskxchange.co

Email: hello@riskxchange.co

United Kingdom

Tel: +44 (0)20 3855 6060

128 City Road,
London,
EC1V 2NX

United States

Tel: +1 669 261 5516

3790 EL Camino Real,
Palo Alto, CA
94360

United Arab Emirates

Tel: +971 58 538 3298

RiskXchange Services FZCO,
Dubai Silicon Oasis,
Building A2,
Dubai