



Strengthening Cybersecurity With Google

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Google Cloud



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Modernized Security for EDU

1

Cybersecurity
threats in EDU

2

Cybersecurity
model for EDU:
The “One Google”
approach

3

Cybersecurity
Risk Protection
Program for EDU

4

Next Steps

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1

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threats in Higher
Education

2

Integrated
Cybersecurity
model

3

Cybersecurity
Risk Protection
Program

4

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The impact of cyber attacks go beyond financial

Don't wait until a data breach happens to put the right security strategy in place

Financial

(e.g Paying for stolen data or compliance fines)



The ransom isn't the only cost that schools will incur. Between downtime, device and network costs, and other expenses for getting back up and running, the total average bill for recovering after a ransomware attack in education is \$2.73 million – higher than any other industry.

Operational

(e.g outages of key financial and T&L systems)



CYBERSECURITY

**California's College of the Desert
experiencing 'system-wide outage' for
most services**

Reputational

Erodes trust and safety perception



Improved data security: Data theft not only damages the reputation of the educational institution but also exposes the institution to liability for theft. Student and staff records contain priceless information that everyone would prefer to stay guarded. Properly designed cloud storage systems offer protection that rivals those of the best on-prem storage options and can ease the mind of CIOs.

The **cost implications** from higher risks

Ransomware **payouts** costs

The average ransom **payout amount increased nearly fivefold** to \$812,360 from 2020, with a 300% increase in the proportion of organizations paying ransoms of \$1 million or more.

[Source: The Journal](#)

Recovery costs

Even in cases where institutions don't pay a ransom, short and medium term unbudgeted remediation costs can be staggering. The cost of ongoing recovery from a Ryuk ransomware attack on a K12 school late in 2020 grew to nearly **\$9.7 million** dollars.

Another institution approved spending nearly **\$9.4 million** on external IT consultants to respond to the ransomware attack it suffered in March 2021.

[Source: www.k12six.org](http://www.k12six.org)

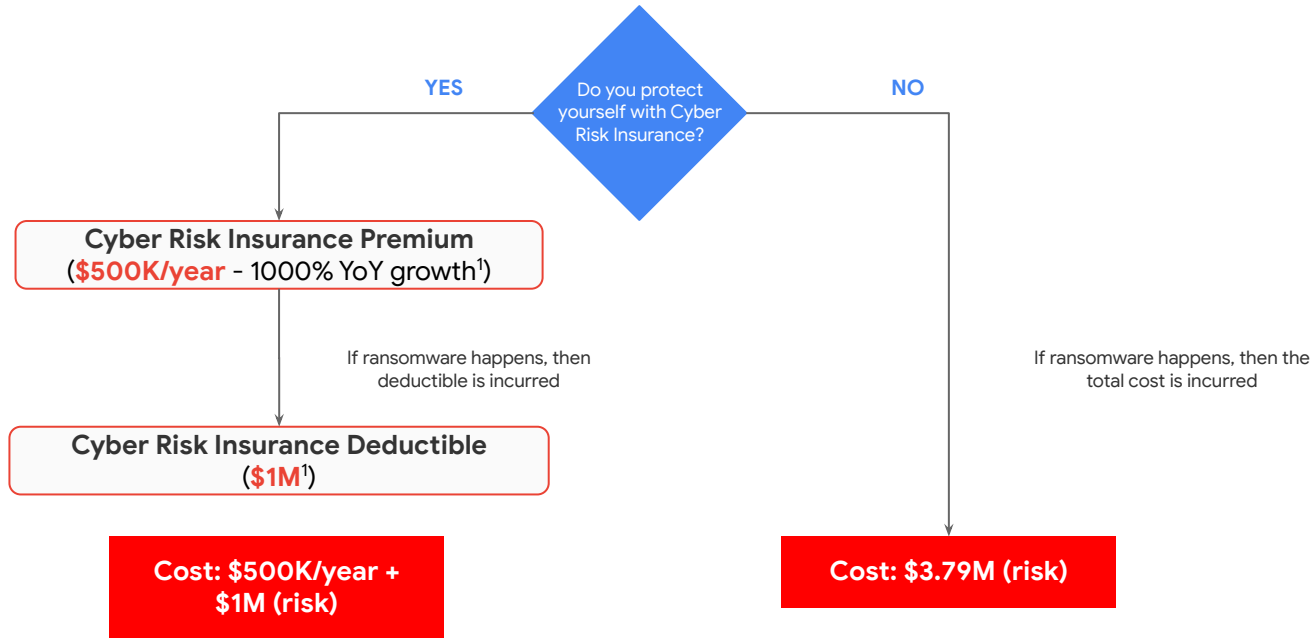
Cyberinsurance costs

Cyberinsurance premiums have begun climbing, and the 2022 Cyber Market Conditions Report from Gallagher Risk Management Services projects that **policies will be 100% to 300% more expensive** for organizations that do not have “best-in-class” security controls in place — **if they are provided a quote at all.**

[Source: Gallagher Insurance Report](#)

An example of financial risk exposure

Average cost of ransomware attack in EDU **\$3.79M**²



¹Source: Business Insurance

²2021 report: Average ransomware cost for EDU

How we're helping EDU to modernize cybersecurity

Better technology, cost-effective model for education

Industry-leading Technology for Reduced Risk



- **Zero-Trust** approach in a “One Google” offering: ChromeOS, Workspace for Education, Google Cloud and Chronicle
- **Premium service partners** with extensive EDU experience to assure a successful implementation and easy management.

Reduced Cost for Cybersecurity Insurance



- Obtain access to Cloud Protection +, an **exclusive cyber insurance policy** that provides specialized coverage, a streamlined underwriting process, and competitive pricing for reducing risk.

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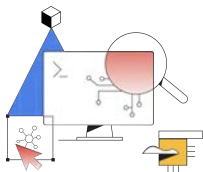
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Cultural challenges in Cybersecurity for Educational Institutions



Awareness

Little to no staff fully dedicated to cybersecurity and often not a priority until an incident happens

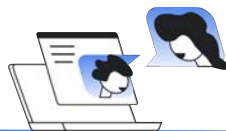
Need to demonstrate impact to improve perceived value



Siloed

Tools don't work together, limited incident response strategies

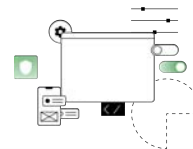
Need to eliminate silo to drive change & have upstream impact



Staffing

Engineers create rules & analysts operate them

Analysts need to be upskilled & take on more engineering work



Modernization

Due to limited funds often dealing with legacy infrastructure and tools

Security operations needs to be prioritized in the Cloud Transformation

“EDU friendly” modernized cybersecurity model

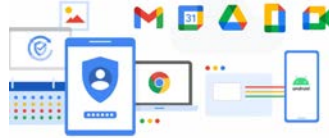
Our priorities as we define our solutions

Easy to manage with
small IT teams



Fully managed services,
with a zero-trust
approach

Proactive well-rounded
security



Devices, Enterprise and
T&L Online Services

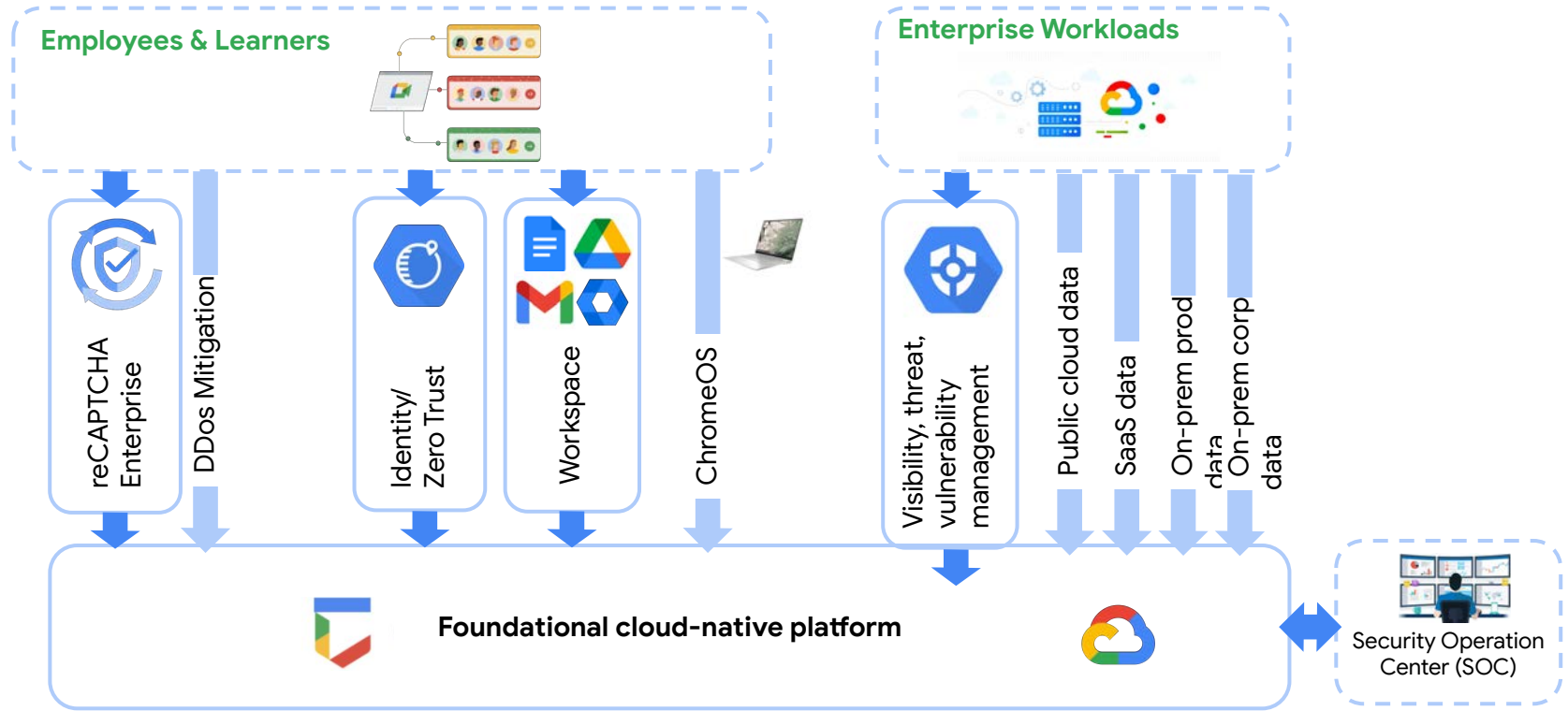
Repeatable and flexible
offering



Proven customizable
packages, trusted EDU
services partners

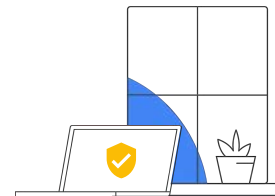
Cloud-native Security Operations

Our recommended model for EDU



Google never stops protecting your digital safety

Google for Education is built with the same best-in-class privacy and security capabilities that Google uses for its own tools to ensure a safer way to learn.



Every day
100 million

Phishing attempts are blocked by Gmail

Every week
30,000

unsafe websites are identified by Google

Every day
74 million

users get help from Google's [Password Manager](#)

Every year
700 million

people strengthen their security with [Security Checkup](#)

There have been **no reported ransomware attacks ever** on any business, education, or consumer Chrome OS device

Google Workspace for Education Security

Available at no charge*

Education Fundamentals

Enable secure learning environments with a set of productivity & collaboration tools, along with security features that let you quickly respond to threats.

Privacy and security highlights:

- Data protection including automatic encryption, two-factor authentication & automated data loss prevention
- Alert center notifications of potential security threats



Paid editions

Education Standard

Enhance security, visibility, and control so you can more proactively manage and protect your educational data, including the personal information of your school community.

Privacy and security highlights:

- Prevent, detect, and remediate threats with the Security Center – including the dashboards, health page, and investigation tool
- Manage data easily with defined data regions, advanced permission settings, & advanced Drive security controls

Teaching and Learning Upgrade

Enhanced educator tools in video communications, class experiences, and academic integrity.

Privacy and security highlights:

Same features as Education Fundamentals

Education Plus

A comprehensive solution with advanced teaching, learning & security features from all Google Workspace for Education editions.

Privacy and security highlights:

Same features as Education Standard plus:

- Priority support from a dedicated team of education specialists



Built-in security and control

Reduce risks with multilayered security and integrated safeguards in Chromebooks.



Embedded security

Built-in virus protection combines with features like 128-bit data encryption, Verified Boot, and sandboxing to protect your institution from evolving cybersecurity threats.



Automatic updates

Chromebooks stay current against the latest threats with updates that happen in the background and don't require a system restart to go live.



Proactive tools and guidance

Stay on top of security with alerts, drill down on incidents with the investigation tool, and get tips from the security health page.



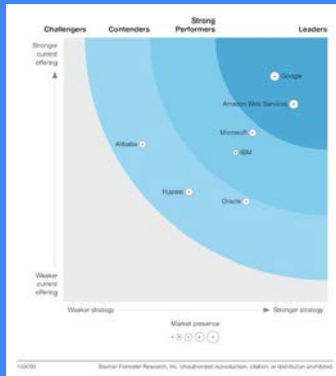
Enhanced control and visibility

Get advanced security features and more data and device visibility, plus 24/7 IT admin support with the Chrome Education Upgrade.

Google Cloud Platform



Take advantage of same **secure-by-design, built-in protection** global infrastructure that Google uses



Built-in Security

Defense in depth, at scale, by default. Shared Fate Security stance, designed from the ground up to handle billions of users. **Forrester recognizes our leadership in IaaS Native Security.**



Leverage Google's infrastructure

Google scans +694k web pages and stops 10M spam emails every minute. **Multi-Cloud from the beginning increases security** posture when moving workloads from anywhere



Enhanced Control and Visibility

You determine and control what happens with your data. **Automated reporting and safeguards** to facilitate the usage in accordance to compliance (**GDPR, FERPA, HIPAA, FedRAMP**, etc)



Continued investments

Dedicated team searching (and employing AI & ML) for and **remediating constantly evolving threats before they enter the platform.** Continued investments in security portfolio (e.g Siempify, Mandiant)

What Makes Us Different



Intelligent data fusion

Timelines and enriched data model for investigation and detection



Modern threat detection

YARA-L for detecting modern malware-based threats



Continuous IoC Matching

Continuous, retrospective analysis of telemetry vs. threat intelligence



Self-managed

Unlimited scale-out without customer tuning, sizing, or management



Hunt at Google speed

Subsecond searches against petabytes of data



Disruptive economics

Full security telemetry retention, analysis **at a fixed, predictable cost**

An institution with 10,000 students & faculty: **the challenge**



Alert fatigue

Too many false positives



Multiple environments

Hybrid workforce & workloads



Lack of automation

Attackers are fast, investigators aren't



Smart detection

Undetected threats, lack of context & enrichment



Tool integration

Too many vendors, context switch, manual integration



Data retention

Cost of long term storage & regulatory compliance



Net impact for an institution with 10,000 students & faculty

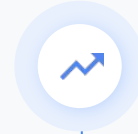
Comparison of option to AL/ML based SecOps

**On-prem
cost
\$13M**

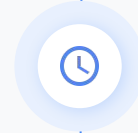
**Google Cloud
cost
\$7M**

**Net savings
\$6M**

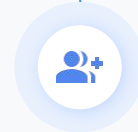
Benefits



Autoscaling managed platform does not require capacity planning, optimization, or heavy administration

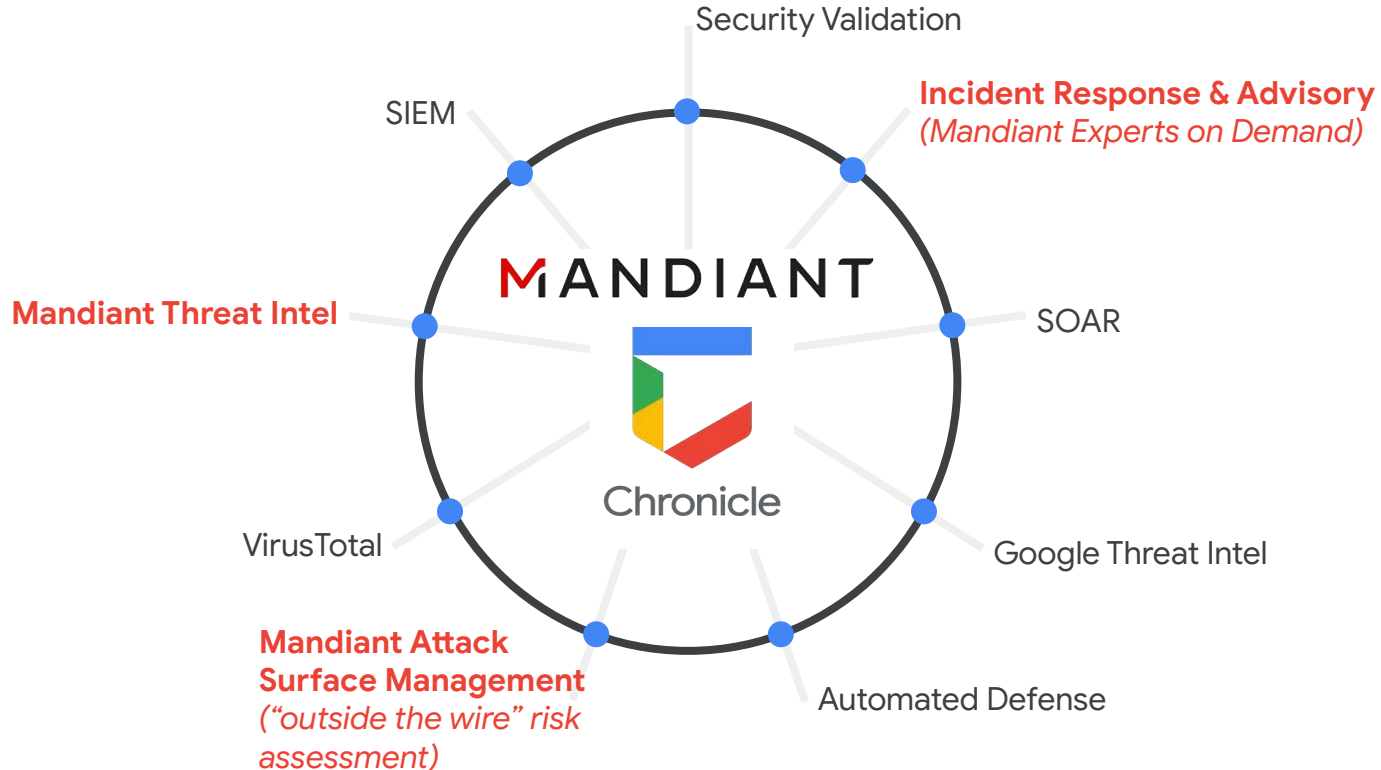


Immediately available data science capabilities to deploy security specific models & shorten time to market



Collaboration with world-class engineering & operations to ensure highest quality models for threat intelligence

The addition of Mandiant services can augment Google Cloud SecOps



Mandiant's Global Expertise

Advisory
Services

Threat
Detection and
Intelligence

Automation and
Response Tools

Testing and
Validation

Managed
Defense

Industry leading technology for reduced risk

Using Google technology is safer and cost-effective for education

Chromebooks protect student data and assure operational continuity

BALTIMORE COUNTY MARYLAND

Baltimore County schools say district-issued Chromebooks, Google accounts are OK to use after ransomware attack

By MCKENNA OXENDEN
BALTIMORE SUN | NOV 29, 2020 AT 6:18 PM



Two Somerset County school districts report cyber attacks

Mike Deak MyCentralJersey.com
Published 5:00 a.m. ET April 14, 2021 | Updated 7:46 a.m. ET April 14, 2021

[View Comments](#)



On Monday, the superintendent said Chromebooks given to students were not affected and students could use them. She also said that while staff email was not affected, voicemail was not working Monday.

Customers using Workspace are 6.3 times less likely to file an insurance claim

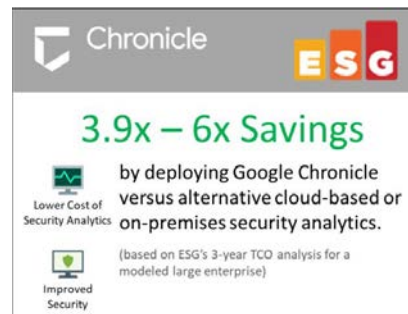
[H1 Coalition Cyber Insurance Claims Report](#)

Relative likelihood of a claim by email provider — H1 2021



Google Cloud + Chronicle TCO advantage

[ESG-EV Report](#)



And don't worry - we will help you recover from unexpected events

Modernized backup and disaster recovery for your on-prem infrastructure

Weather Events and Unplanned outages

Hurricanes, tornadoes, floods, fires these are all examples of weather events that can occur suddenly and cause **major disruptions to data center functions**, and supply chain effects impact backup generators. **Offsite cloud backups ensure your data is safe even if there is detrimental damage at your primary location.**

Ransomware and other cyber incidents

When ransomware, worms, trojans, or other types of malware infiltrate networks they cause corruption, outages, slowness, data loss, and more. **Without a solid backup strategy critical infrastructure could be down permanently.**

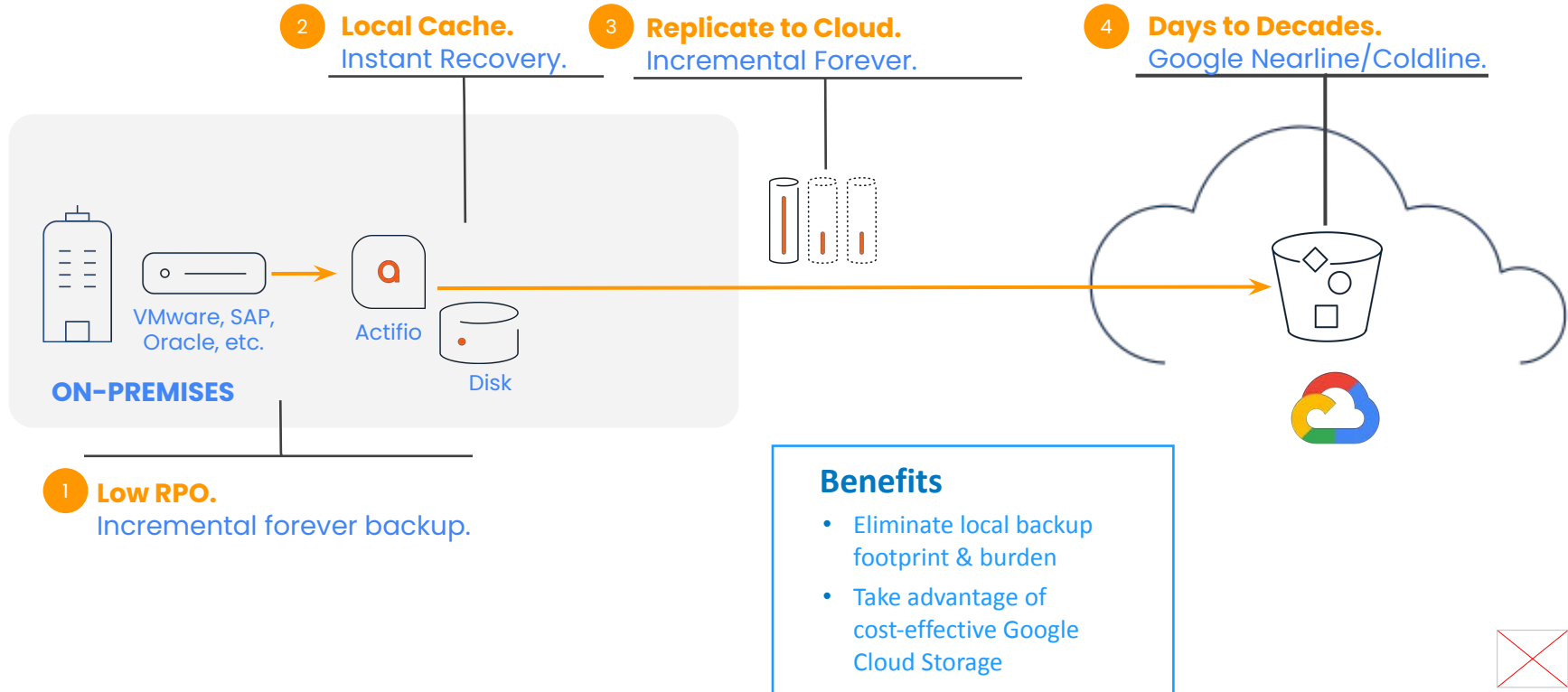
Hardware or software failure, data corruption or accidental deletion of data

Failures of hardware, software, or human error can lead to **outages and permanent data loss**. Cloud backups allow administrators to quickly bring up new servers or pull from backups limiting the impacts of these events.



And don't worry - we will help you recover from unexpected events

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Google Cloud: Modernize your security



In Cloud



On Prem

Built-in safety with the most secure, transparent, and compliant cloud

Powered by our global infrastructure and intelligence

Bring the power of Google's infrastructure and intelligence to everywhere your systems run

Google Cloud for Education Risk Protection Program

Google Cloud Risk Manager for Reduced Risk



- **Proactive Remediation:** quickly assess your risk posture, integrates with your existing tools to help remediating risks.
- **Automated Security Reporting** and streamlined process for procuring cyber insurance at a discount

Reduced Cost for insurance via Cloud Protection+





- **Exclusive cyber insurance policy for Google Cloud customers** that provides specialized coverage, a streamlined underwriting process, and competitive pricing for reducing risk.



Choose a Security Partner who is in the trenches with you



Munich RE  Allianz 

Cloud Protection +
Innovative Cyber Insurance Solution for Google Cloud Customers

[Download Brochure](#)



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Get started today

Let's do this journey together

Feasibility Study



Discover and Evaluate

Joint discovery and assessment to determine the right solution for your institution

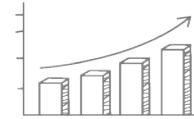
Modernized Security Plan



Design and Planning

Determine the right offering and implementation plan to ensure a successful journey

Implementation



Implementation

Deploy, validate, train and engage in a sustainable innovation model





Thank you.

Google Cloud

Learn more at

[Google Cloud for education](#)

Connect with us

Email kpatullo@google.com to schedule a meeting