

DATA CLASSIFICATION AS A CLOUD STRATEGY

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1. INTRODUCTION

Data Classification has been used for decades by organisations and individuals to help make decisions on data and content.

Origins within military outfits, the classic practice of marking something with a physical stamp and ink to showcase its importance has gone on certainly for over a century now. Fundamentally, this is still the same practice we are referring to, just the 21st century equivalent ready for the digital world.

By implementing a Data Classification strategy within your organisation you're gaining benefits across many levels. Some obvious but some slightly less so. The first of these is giving data an identity, as data or content as it's created has no real identity; certainly not without reading it or processing it in some way. By giving data a classification, we are imparting an identity to it, essentially saying this data is of this type, for example: *general business*. What that allows us to do as human beings is apply the right procedural elements to it, release controls to it and to recognise it as a data type at a glance.

The same goes for machines, by giving it an identity through a meta-data tag associated with the classification, decision making can be applied easily for things such as Data Loss Prevention (DLP), Digital Rights Management (DRM) or Cloud Application Security Broker (CASB) systems.

Once that's done the benefits can start to be recognised, reporting for compliance legislation becomes easier. Understanding our data landscape starts to happen naturally and you'll also be able to use that classification data to help with things like archival or Data Subject Access Requests (DSAR).



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Sam Malkin, Lead Solution Architect at HANDD Business Solutions



One of the bi-products of data classification is also end user awareness. With 30% of data breaches originating internally it is often not the malicious users or outsiders ex-filtrating data, but instead Wilfully Intended Misguided Persons (WIMPs) who are just trying to do their day jobs. These folks don't understand the risks of moving items outside of the organisation or printing something to a public printer then not collecting straight away. Or emailing documents without protection when perhaps it should be applied.

By having a Data Classification policy and supporting software, end users will learn to handle data types with care when performing their roles. In fact this is arguably the most valuable outcome of any Data Classification implementation; because human beings are without doubt the biggest risk to any organisation.

Data Classification remains a key part in lots of legislations and standards; NIST recommends Data Classification as part of effectively managing and securing your data. Similarly, PCI-DSS, ISO27001 and GDPR all either mandate classifying data or recommend it to make your life as an IT or security professional easier.

2. MODERN LIFE IS GOOD (ISH)

Despite its origins as a physical practice back in 1900s, Data Classification is just as important in 2021 as it probably ever has been.

Looking at the world we live and work in now, it is a million miles away from those stamps, files, and typewriters. Not only has digital transformation changed the way we produce and handle data, it has also increased the rate and ease at which it is produced.

Adding to this the COVID pandemic, an increase in flexible working, and remote workforces driving cloud adoption, we are now at a time and place where understanding the content our users are handling outside the perimeter is key to ensuring data remains safe.

The last year accelerated adoption of cloud technologies and in some cases even completely manufactured cloud strategies inside organisations who never intended to have one in the first place.

Being forced to rapidly adopt these platforms meant the usual due diligence and security requirements were set aside in favour of enabling our workforces to keep the lights on!

Following this major shift in working scenarios and work life balance it's expected that 60% of employees wish to continue on this pattern and not return inside the perimeter of a traditional office.

This sees the decentralisation of data increasing at an exponential rate, much faster than previous digital or cloud transformation projects would ever have achieved.



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3. DATA PROLIFERATION

With all this in mind, our technology ecosystems are looking more fractious and scattered than ever before.

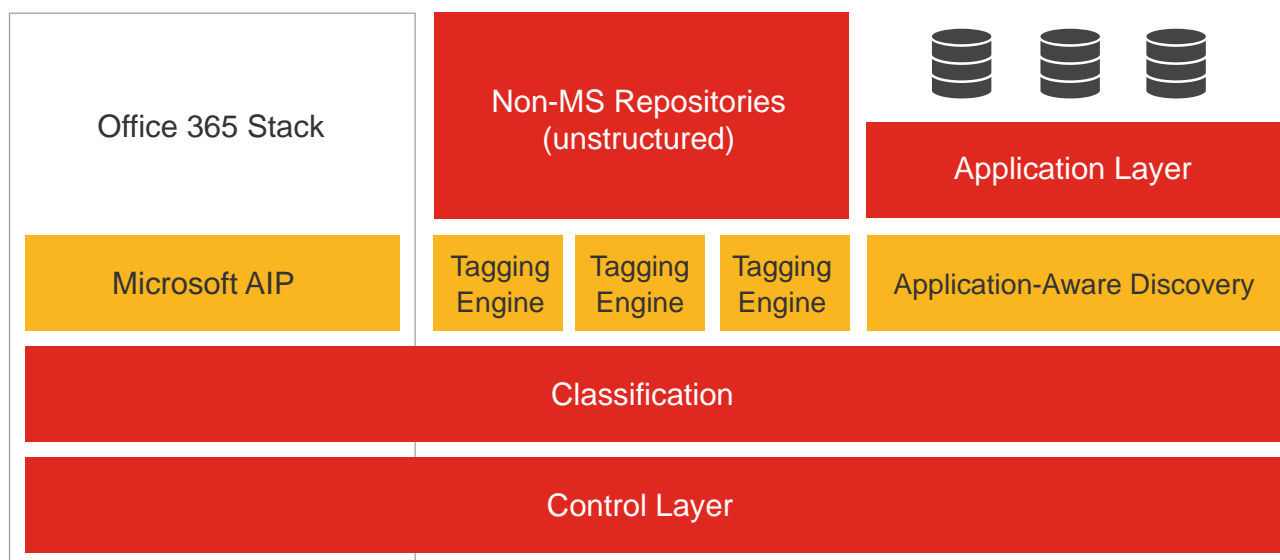
It's not realistic to think all your data will reside in one platform or service nowadays and likewise it is impossible to find and categorise it all easily when the need arises because it isn't inside a single repository. In fact it's not even in a single building or network now!

Cloud vendors are increasingly giving the means to perform Data Classification in their platforms, to try and wrestle back a modicum of control like our physical stamping examples of the 1900s. This is often only akin to applying a sticking plaster though as the toolsets are somewhat diet editions compared to the full fat external offerings. And like most cloud services and add-ons, you'll pay for the privilege.

The real issue with using cloud offerings for data classification is that it only covers a percentage of the data you're using and producing. If you take out services through one of the hyperscalers you'll only be classifying data in that platform using a schema and rule-set that exists *only* for that platform. With large enterprises now looking at multi-cloud strategies to de-risk in the same way we saw multi-vendor decisions being made when it came to networking hardware its plausible to have many data classification mechanisms which are not interoperable with one another.

Storing data in the cloud costs money, if you're not going to move your legacy data or structured data to the cloud how will it be classified and protected? Risk exists for all data, regardless of it's platform of origin or final destination. If you can only cover 40% of your data or 60% of your workforce then you're no further forward.

Figure 1: Data Infrastructure



4. DATA IS STILL YOUR ISSUE

Regardless of platform, your data remains your problem. Infrastructure as a Service, Platform as a Service, Software as a Service all only manage up to the data layer. No platform exists where the classification of data or the management of that data is not the responsibility of the customer still.

Regardless of how it is achieved, good data hygiene standards are down to you and your user community.

Data Classification and Data Privacy functions are not set and forget controls, far from it. Environments change, organisations grow, new compliance regulations are born.

There are so many different reasons that your classification setup will need to be constantly re-evaluated, meaning more disruption to your user community, changes to policy and working practices.

At HANDD we've developed a framework of different classification deliveries which cater for this evolution.

By implementing a policy setup from the outset which can interchange with requirements and be managed proactively rather than set in stone, legal requirements and the ever-changing need to classify information can be catered for.

Figure 2 (below):
Data Accountability

At HANDD we've developed a framework of different classification deliveries which cater for ever-changing requirements.



Responsibility	IaaS	PaaS	SaaS
Data classification and accountability	Cloud customer	Cloud customer	Cloud customer
Client and end point protection	Cloud customer	Cloud customer	Cloud customer
Identity and access management	Cloud customer	Shared	Shared
Application level controls	Cloud customer	Shared	Cloud provider
Network controls	Cloud customer	Shared	Cloud provider
Host security	Cloud provider	Cloud provider	Cloud provider
Physical security	Cloud provider	Cloud provider	Cloud provider

Legend: ■ = Cloud customer, ■ = Cloud provider

better idea

5. ENABLING CLOUD ADOPTION

Cloud and data classification complement each other. Migrating to the cloud is easier to accomplish if your data is labelled and has identity tied to it. Once in the cloud data is controlled so much easier by making decisions upon it based on classification.

The cloud era bore a new type of data security: Cloud Application Security Broker (CASB). This, Secure Web Gateways and traditional DLP platforms are growing closer together to cope with the modern way of working and controlling our data flows from multiple non office locations and platforms.

All of those platforms are strengthened by data classification being present within your organisation.

Should this data be permitted in the cloud? Should this data be permitted outside of the cloud? Should this data be permitted on this platform or cloud application?

To make those decisions, the data and content needs to be analysed, and then ultimately classified or categorised by the tool. With our growing expanses of data to achieve this on all information needs increasing allocations of compute power, whilst more than achievable with today's security offerings a true data classification tooling has persistent classification which travels with the data. Meaning an instant 'yes or no' decision on the data and actions can be achieved through simply querying this aspect of it. Reducing the time taken, reducing false positives and saving money.

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HANDD Business Solutions (HANDD) is an independent specialist in global data security. We are suppliers to 8 of the 10 largest banks in the world, 2 of the world's top 5 investment organisations, and 45% of the FTSE 100.

HANDD has more than 500 clients spanning 27 countries across the energy, financial services, insurance, manufacturing, retail and utilities sectors.

HANDD's specialist knowledge and unrivalled expertise makes it a trusted advisor in securing a client's data wherever it travels, from consultancy and technical design, through to implementation, training and support.



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