



Data Security Levels

A Business White Paper

With an ever increasing quantity of data and people wanting access to that data, it is necessary to define Data Security Levels and to determine what is and is not possible at each of those levels.

This Business White Paper, defines what the Data Security Levels mean and from there, the impact on the business.

The majority of data within a business will be at Level 8 or higher.

Introduction

Data Security is of paramount importance to businesses, it forms the basis of all that the business is and all that it does. Recent data breaches have shown that too much information is freely available within businesses.

All too often, the subject of Data Security is given little or no prominence within a business or organization, with the effect that it is neglected. As a direct result of this neglect, little consideration is given to the consequences of a data breach.

This Business White Paper intends to be the start of a change in the way Data Security is prioritized and how it is treated within a business. With an emphasis on the different classifications or levels that different:

- Transmission methods
- Storage options
- Scope of availability
- Ease of accessibility

Given, it is possible to determine the most effective strategy in dealing with the data.

This Business White Paper forms the basis of more detailed research and business process changes.

Despite the importance of the data or information, most business data exists at Level 8 or higher!

Definition of Levels

A lower numeric level signifies a lower level of risk and consequently a higher level of security.

This means that Level 1 is the most secure and Level 10 is the least secure.

Level 1

This the most secure level, to be classified as level 1, the data must never have existed. This include written on any medium, spoken or thought about by an individual.

Transmission: **Not possible**
Network: **Not applicable**
Storage: **Prohibited**
Availability: **Nobody**
Accessibility: **Not applicable**

In its simplest form, for data to remain secure it must never exist.

Level 2

At level two the data must never have been communicated to anybody. The person or entity that created the data must be the sole user of that data. The implication, is that the data is never stored in any kind of physical or electronic media. While this does not preclude electronic storage it certainly is not encouraged.

Transmission: **Prohibited**
Network: **Not applicable**
Storage: **Prohibited**
Availability: **Creator**
Accessibility: **None**

Level 3

The data may be stored and processed in an encrypted system. This maybe electronic or a physical medium such as paper. The systems may not be connected to an external network. The data may not be transported from this location.

Transmission: **Prohibited**
Network: **Not applicable**
Storage: **Maximum encryption**
Availability: **Authorized individuals**
Accessibility: **Severely restricted**

Level 4

The data must be stored and processed in an encrypted system. The data may be transferred in an encrypted form. The data must always remain under the control of a person. Very strong encryption must be used. The data may not be transmitted in any form over a public network.

Transmission: **Very high encryption**
Network: **Private and secure**
Storage: **Very high encryption**
Availability: **Authorized individuals**
Accessibility: **Very restricted**

Level 5

At all times the data must be encrypted. It may be transmitted in an encrypted form over a public network. The strong encryption must be used at all times.

Transmission: **Strong encryption**
Network: **Public**
Storage: **Strong encryption**
Availability: **Authorized individuals**
Accessibility: **Restricted**

Level 6

The data is always encrypted during transmission and transportation. The information is encrypted while stored and only those who need to access the data have access.

Transmission: **Encryption**
Network: **Public**
Storage: **Encryption**
Availability: **Authorized individuals**
Accessibility: **Restricted**

Level 7

Some data is encrypted, but generally weak encryption is used, encryption is used while transmitting the data and reasonable efforts are made to keep the information confidential.

Transmission: **Weak encryption**
Network: **Public**
Storage: **Partial encryption**
Availability: **Most individuals**
Accessibility: **Broad access**

Level 8

And no encryption is used to store the data and weak encryption is used during its transmission

Transmission: **Weak encryption**
Network: **Public**
Storage: **Plain text**
Availability: **All individuals**
Accessibility: **Broad access**

Level 9

No encryption is used at all, any security is by obscurity.

Transmission: **Plain text**
Network: **Public**
Storage: **Plain text**
Availability: **All individuals**
Accessibility: **Broad access**

Level 10

Widely published on the internet, available via or on social media and is generally available via a simple search.

Transmission: **Plain text**
Network: **Public**
Storage: **Plain text**
Availability: **All individuals**
Accessibility: **Universal access**

This is the least secure any information can be.

It is important, that at all times care is taken to ensure that data remains within its predetermine Level. It is all too easy for Data Security to become lax and data begins to drift up the Levels.

Key

Transmission – this defines how data is moved from one place to another. It includes the Internet, USB pen drives, hard drives, and of course printed media.

Storage – shows how the information is kept in a permanent form.

Availability – defined who has access to the data or information.

Accessibility – indicates how easy it is to access the information.

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