

# XML Security Essentials

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# What Is XML?

Simple language used to transfer data and structure.

Syntax like HTML, extensible, self describing.

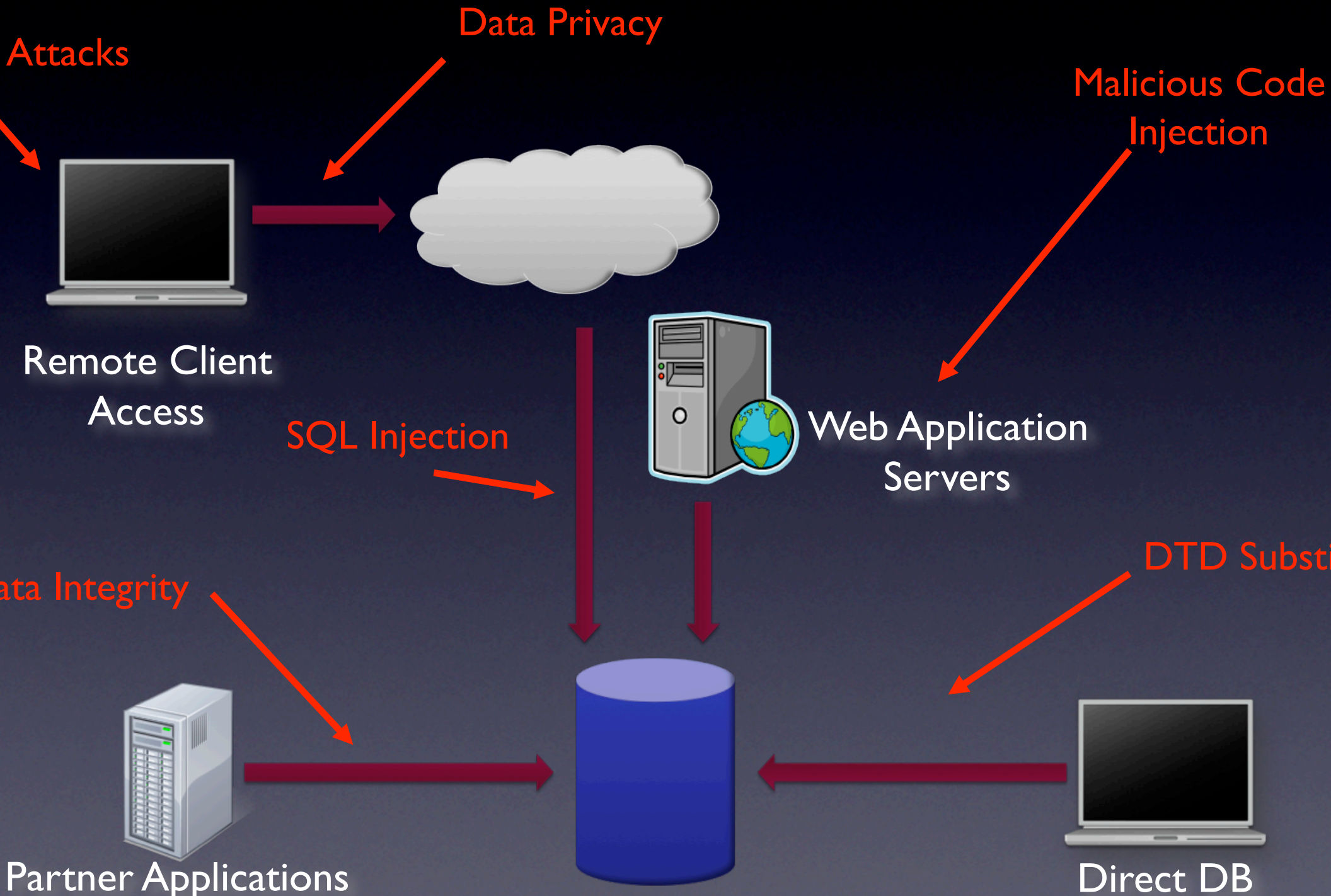
Used everywhere!

Data privacy and security not designed in.

```
<?xml version="1.0"
<quiz>
  <question>
    who was the forty
    president of the
  </question>
  <answer>
    William Jefferson
  </answer>
  <!-- Note: We need
    more questions
  </quiz>
```



# Show what's the problem?



# Security Issues

Data privacy

Data and structural integrity

Service abuse and misuse



# Security Tools

Encryption

Digital signatures

Everything else ...

- Key Management
- Access control
- Parsers
- Gateway security

# Secure Deployment

encrypt contents  
digital signatures

content validation  
transport security  
content parsing

```
<?xml version="1.0"
<quiz>
  <question>
    Who was the forty-second
    president of the U.S.A.?
  </question>
  <answer>
    William Jefferson Clinton
  </answer>
<!-- Note: We need to add
      more questions later.-->
</quiz>
```

**XML**





# Additional Reading

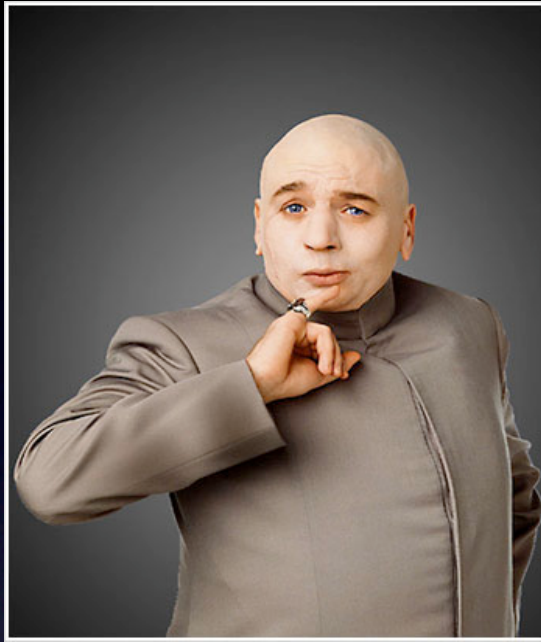
WC3 XML encryption guidelines

XML.org

Apache XML security tools

OWASP gateway security project

# Have a Plan



Attacks on XML can be very subtle and hard to detect. At the very least, SSL should be employed for basic data privacy and integrity.



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