

IY5601 coursework

6th March 2006

1. The OASIS SAML standard defines several types of assertions.
 - (a) Explain what a SAML assertion is, and describe three types of statements that such an assertion may contain. For each type of assertion, give a short sentence describing an example.
 - (b) In addition to these statements, what other information must a SAML assertion contain?
 - (c) What optional element may a SAML assertion contain to control the use of the assertion? Give a short sentence to describe how this element may be used.
2. A manufacturer supplies parts to many different companies. The purchasing officer's job in these companies is a dynamic post, and the identity of this individual changes frequently as employees move around within each company.
 - (a) What security problems does this pose to the supplier who wishes to automate his sales procedures using the Internet?
 - (b) Assuming that the supplier trusts one entity in each company, explain, with the aid of a diagram, how SAML can be used to simplify the problem of authentication and authorisation for this supplier.
3. The OASIS WS-Security standard provides support for security tokens in SOAP messages.
 - (a) Where would a security token be found in a SOAP message, and what would the information contained in this token be used for?
 - (b) List three types of security tokens supported by WS-Security.
 - (c) How could an X.509 BinarySecurityToken be used for authentication in a WS-Security message?
 - (d) How could an SAML BinarySecurityToken be used in a WS-Security message?