CS460 Writing Assignment One

Due 2/25/10

Uncle Ezno wants to proceed on CosaNostra Pizza's delivery routing program. In the past several weeks, you have been investigating a variety of technologies that might be useful in securing the new deliverator routing software. Uncle Ezno wants a final report, so they can proceed.

The Design Goals

The deliverators are strongly motivated to deliver their pizzas within 30 minutes. Improving routing technology will increase their on time delivery and reduce collateral damage inflicted by the highly motivated deliverators.

Logically, the routing program will respond to deliverator requests for directions. The street geography can be highly changeable day-to-day or even hour-to-hour, so the routing program should potentially accept street updates from a variety of sources including traffic reports, burbclave construction notices, and even the deliverators themselves.

CosaNostra Pizza has employed another consulting group to examine network security and authentication mechanisms. You should assume that the design has a variety of network encryption and authentication mechanisms at its disposal.

The Deliverables

Your report will have two major deliverables: a threat analysis and a security architecture.

The IETF's DNS Threat Analysis (RFC 3833) handed out in class is an example of a threat analysis report, although it was written after DNS had been implemented and deployed for some time. Your threat analysis should enumerate the assets and the security goals and non-goals with respect to those assets. From that base, you should be able to identify four to six of the security threats that seem most feasible.

The security architecture highlights the security aspects of the system. You can take the functional elements (like the delivery algorithm) as a given. Your security architecture should outline how sensitive data in the system should be protected. How the information should be shared. You should discuss how the security architecture addresses the threats identified in the threat analysis. Since you have investigated security mechanisms in Windows and Linux, your design should concentrate on these endpoint operating systems. The security architecture should outline the network security requirements to share with the other consulting group.

Formatting

The report should be roughly five pages long. Format requests include: 10-12 point font, single space within paragraphs, and double or space and a half between paragraphs. A diagram or two will probably be useful to present the threat analysis and/or security architecture.