Systems and Internet
Infrastructure Security

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Mitigating DoS Through Basic TPM Operations

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Protecting Resources

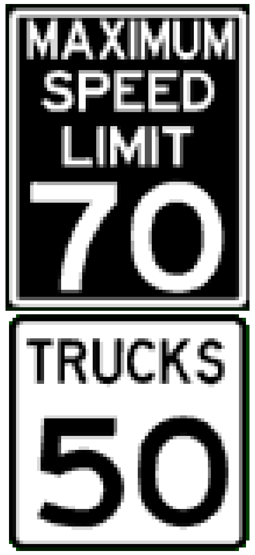
- Client puzzles have been proposed to protect against DoS attacks
- Traditionally, puzzles make clients "pay" for access with CPU resources
- Determining the correct puzzle hardness for a client is difficult
  - Memory-based puzzles (Abadi et. al.)

Using Security Devices

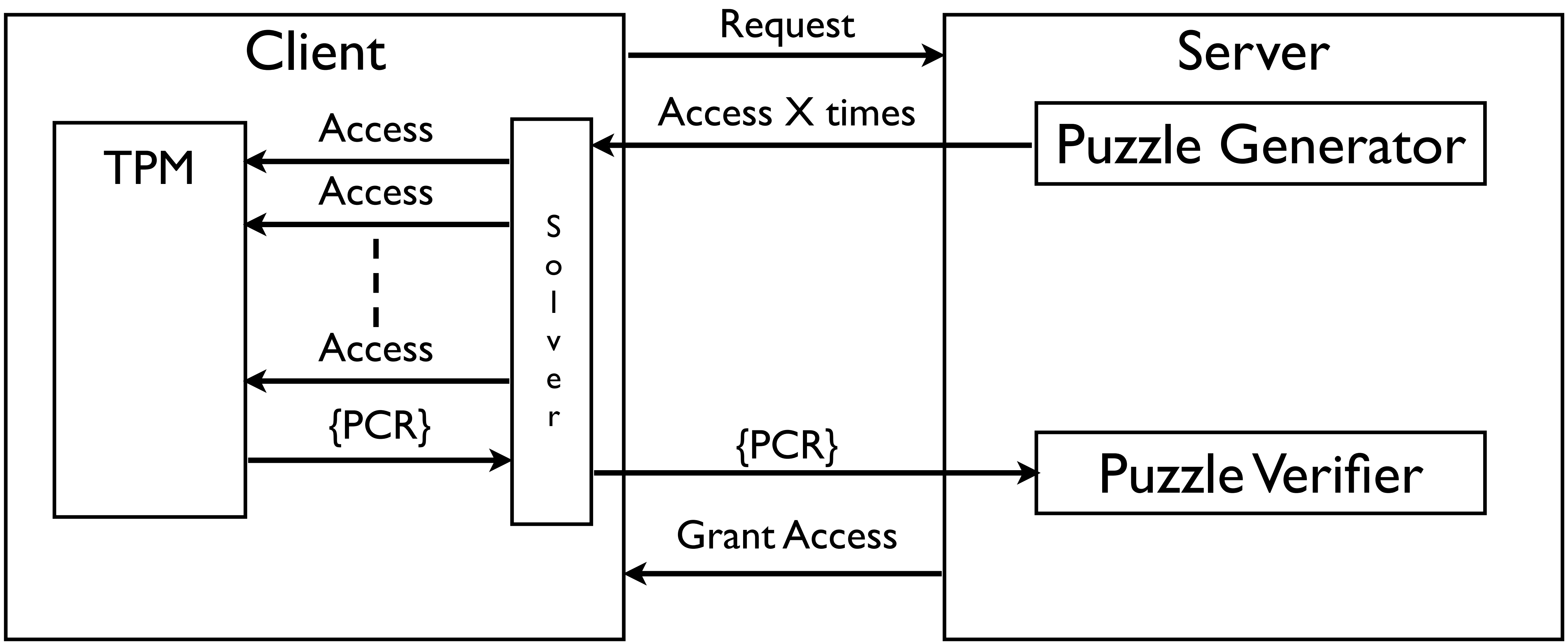
- We have been told the Trusted Computing Group's (TCG) Trusted Platform Module (TPM) can make our systems more secure
- How can we use the TPM in non-DRM type applications?

TPM-based Client Puzzles

- A novice approach
  - attest remote solution code
- The TPM is *slow* and we can *verify operations*, let's use these facts
- Keep track of TPM accesses
  - The TPM is good at keeping state (PCR values)



High-level Architecture



Questions?

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