

## Study Questions

*“The Spring Nucleus: A Microkernel for Objects”*

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CS 4210 Advanced Operating Systems

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1. What were the objectives of the Spring project in the early 90s at Sun Labs?
2. What exactly is a “door” in Spring?
3. The Spring designers considered “one-way doors” as an option. A call-return could be implemented by the caller “passing” a return door to the callee. Why didn’t they use this approach? What technique did they implement instead?
4. How does Spring ensure that “server threads” are available to complete a cross-domain call?
5. What happens in Spring if a machine in the middle of a cross-domain call-chain crashes?
6. [Just for fun –pwh] How do doors work in Solaris 7? (Try “man –k door” and then look at the various door\_ functions.)