

- A protocol plans to have dozens of vault contracts which it wishes to be able to upgrade all at the same time, which upgradeability pattern should they use?
- Order the 5 upgradeability patterns in terms of gas efficiency upon user interactions, explain your reasoning for each placement.
- How can storage collisions occur when using a proxy?
- Do storage collisions apply when using the Eternal Storage upgradeability pattern? Why?
- What is function selector clashing and how can it cause unexpected issues?
- What is the purpose of the `__safe_upgrade_gap` variable in the following MixinRoles contract? Why is it necessary?
- What differences are there between the transparent and UUPS upgradeability patterns? What are the pros/cons of each?
- Briefly explain the Diamond Standard at a high level. What does it achieve? How does it achieve it?
- What is malicious about the following proxy? What other risks exist?
- Is this an appropriate implementation of a UUPS compliant implementation contract? Why or why not?