Checkpoints of GUI-based Applications
A new system, called guievict, that enables the GUI of any application to be migrated to another display without premeditative steps such as re-linking the application program binary.
1. Migration occurs at application granularity.
2. Any application program can be migrated without modifications.
3. Migration can be unpremeditated.
4. No modifications to window system code are required.
5. The guievict functionality can also be used to replicate the GUI of individual applications.
Session Migration:
A user's entire desktop is migrated to another machine.

Advantages:
1. flexible
2. simple
3. other useful operations
- It requires the user to install our X window server extension on their desktop hosts
- It requires the availability of symbols for the window protocol stubs used by the application
- It has a large (20 second) overhead in checkpointing font state
GUI Migration

GUI Replication

GUI + Process Migration
GUI-based application
GUI migration

- GUI migration is broken down into two steps
  1. Initialization
  2. Detach
  3. Re-attach
Initialization
Detach
Re-attach
GUI Replication
GUI + Process Migration

1. Detach

2. Checkpoint

Check point file

3. Restart

4. Re-attach
Conclusion

- Guievict enables the GUI of an ordinary X windows application to be migrated to another desktop host without premeditative steps.