Risk System

* Import trade data from Trade Data System
* Import counterparty data from Reference Data System
* Join them and calculate risk
* Generate report
* Distribute report
* Configure business users
* Maintain parameters used by the risk calculations
* Report to Central Monitoring Service

Admin

* Configure business users

Business user

* Access reports

Authorized user

* Modify parameters for risk calculation

*a. Find the architectural characteristics of the ticket system*

* Security
* Accuracy

*b. Write one or more scenario’s for each architectural characteristic*

* Security
  1. Allow to see reports only by the authorized users
  2. Allow to modify parameters for risk calculations only by a subset of the authorized users
* Accuracy
  1. Generate accurate reports before 9am Singapore time

*c. Define your architecture in one or more diagram(s). Show as much architectural*

*important aspects as possible.*

Diagram

Description automatically generated

*d. Find the risks of your proposed architecture*

Diagram

Description automatically generated

If TDS and RDS are failed or slow, reports can’t be generated on time

Unauthorized user can access reports

Unauthorized user can change parameters

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*e. Find options to mitigate the risks you found in part d.*

Diagram

Description automatically generated

Caching

Publish-subscribe at every trade

Use two factor authorization for both cases