

Chapter 5 Conclusion and future work

5.1. Conclusion

In this thesis, a new database access control model is presented as an extension to CPBAC model, MD-TRBAC model, and PBFW model. The newly proposed model is based on the characteristics of roles, purposes, tasks and policies.

The proposed model has the following features:

- more Information extracted conditionally assuring the same user privacy;
- dynamic and Active permission assignment;
- authorization policies to support dynamic separation of duty;
- permission inheritance scope, eliminating the shortage of high management complexity caused by inherited relationship in the traditional model;
- suitable for workflow and non-workflow systems.

A formal description of the proposed model is discussed in details through the integration of the related models with a simple and manageable cost. The application of the model is illustrated using a case study. Finally, comparison to the related models is discussed using a case study shows the key features of the proposed model and how it improved the related models.

5.2. Future work

Study of the related work showed the importance to include the extensions listed below. of the following features below, as we stated in Chapter 1 section 2.9.

1. Study possibilities of the proposed model to be extended over data streams.
2. Study possibilities of the proposed model to be extended over distributed system.
3. Study possibilities of the proposed model to be extended over XML databases.

It was stated in section 2.10 that these extensions are left for future work.

Also, during implementation the following extensions were discovered to be useful.

1. Non-centralized management of permission assignment.
2. There will be many policies in enterprise environment, and as a result it is important to manage authorization policies and optimize policy description.

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