

Multi-user access and restriction (General solution)

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Background

- ICIS Workshop 2007: Presentations by Sandra (UQ) and Shawn (AAFC) about their needs of restricting user access (per-project basis) to ICIS data.
- ICIS Workshop 2008: Presentation by Casper about the Virtual Private Databases (VPD) strategy in Nunhems & Bayer
 - → Handles user access restrictions per project/crop
 - \rightarrow Oracle-specific solution; "optional solution for others".

(Detailed discussion later by Sebastien)



Follow-up: AAFC issues

Project Data:

- Collaborators would like to keep their project data separate from the rest of the research centre data
- Datasets overlap, depending on the project which causes multiple locals to manage (BAD!!!)

• Breeding Data:

- Some breeders would like to keep their early generation data and genotypic data private (only access to it within their own research centre), while other breeders are willing to share across AAFC.
- Only worried about DMS at this point

Solution to the problem: Option #1

 Discussion at IRRI about possible solution to AAFC restriction issues, Sept 2008 (Attendees: SYates, MHabito, APortugal, RValerio).....



	ID	USERID	PMKEY 1	
	1	108		
	2	108	2	
*	(AutoNumber)	0	0	

1) New table <u>PROJUSER</u> in DMS to contain user-project matching. (User may belong to several projects)

ROJUSER

USERID PMKEY

4) Contents of original STUDY table are copied to table M_STUDY. STUDY table is populated with studies that a user has access rights to (based on his/her project)

3) Add entries to GMS.UDFLDS table with <u>FTABLE = 'PROJUSER'</u> and <u>FTYPE</u> <u>= 'PMKEY'</u> to define matching of a project

management ID to a project name.

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-	USERID						
	INSTALID						
	USTATUS						
	UACCESS						
	UTYPE						
	UNAME						
	UPSWD						
	PERSONID						
	ADATE						
	CDATE						
	6						
	STUDY						
	STUDYID						
	SNAME						
	PMKEY						
	TITLE						
	OBJECTIV						
	INVESTID						
	STYPE						
	SDATE						
	EDATE						
	USERID						
	SSTATUS						
	SHIERARCHY						
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	RDWO						
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	ETVDE						
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1	ENAME						
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USERI	INSTAL	US	UAC	UTY	UNAME
3	60	1	100	422	LOCALUSER3
-2	60	1	100	422	LOCALUSER2
-1	60	1	100	422	LOCALUSER1
108	60	1	100	422	RBREED
	0	0	0	0	1991-0199000000

			•
STUDYID	SNAME	PMKEY	
	5 UWS03-02	1	Jp
	4 UWS03-01	1	Jp
15	3 UDS03F4	2	Lin
1	2 UWS02F3	2	Nu
16	1 UWS02AYT	2	J٧
	٥	0	-
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2) The DMS.**STUDY** table (ICIS schema v5.5) has a <u>PMKEY</u> column (but currently not being used), to contain the project management ID. (Study belongs to one project)

16	FLDNO	FTABLE	FTYPE	FCODE	FNAME	FEMT	FDESC
	1	PROJUSER	PMKEY	1	PROJECT 1	11:	PROJECT MANAGEMENT INDICATOR 1
	2	PROJUSER	PMKEY	2	PROJECT 2		PROJECT MANAGEMENT INDICATOR 2
*							

SCALEID

Solution to the problem: Option #1 (cont'd)

Assessment:

- 1) With MS Access in mind
- 2) Only one user may use the database at one time
- 3) Restrictions only at application level (not secure)



Solution to the problem: Option #2

 Adopt the Oracle VPD strategy used by Nunhems & Bayer

Assessment:

→ Multiple users may use the database at one time
→ Security at application-level and database-level
→ Must move away from MS Access backend
→ Evaluate backends with VPD capabilities