



Shared IT Services for Higher Education & Research

Conference 2017

Banner Document Management System

University of the Fraser Valley

Background and Strategy

- **Definition:** Document Management system is a complete solution for digitizing and managing information and reducing paper costs, providing the tools for imaging, storing, managing, and retaining critical documents across UFV
- **Business needs areas:** Office of the Registrar, Student Services, International Education, Finance, HR, and Purchasing

Background and Strategy

- Legacy System:

- A subset of Document Management functionality, Document Imaging, was formerly enabled at UFV by a homegrown custom application
- Built in early 2000s
- Windows XP-based; Visual Basic application
- Flat file data structure
- API components incompatible with newer OS
- Developer left with no knowledge transfer

Background and Strategy

- Project objectives:
 - Replace aging Document Imaging system in OREG
 - Reduce costs by capturing and converting paper-based content into electronic images
 - Improve security by applying more consistent retention policies across campus
 - Reduce risk through automated archiving and back-up of managed content
 - Build a foundation for more efficient workflows and processes

Background and Strategy

- Project requirements:
 - Create a fully searchable, centralised document repository
 - Support document imaging, sharing and retention
 - Support single sign-on using institutional credentials
 - Make system available to OREG, Finance, HR, Purchasing, Student Services & UFV International
 - Integrate with Banner and Luminis Portal

Background and Strategy

- Product Selection:
 - ERP vendor (Ellucian) preferred due to full Banner integration and future opportunities for hosted/cloud service
 - High license costs addressed by gradual increase in licensing levels
 - Full needs analysis and implementation support
- Phased Approach:
 - Address immediate needs in OREG, while preparing for wider rollout to Student Services
 - Defer Finance and HR implementation

Background and Strategy

- Project Plan:
 - Timeline: June 2016 - February 2017
 - Scope:
 - Provisioning and configuration of UFV infrastructure
 - Business needs analysis (on-site, Ellucian)
 - System setup (Ellucian – test; UFV – production)
 - Migration of 1.5 million of legacy images (UFV)
 - User Training (Ellucian and UFV)
 - Legacy System Decommissioning (UFV)
 - Resources:
 - **ITS:** PM (20%), System Analyst (40%), Programmer-Analyst (20%), DBA (20%), Deployment Specialist (20%)
 - **Ellucian:** PM, BDM Analyst, BDR Analyst
 - **OREG:** Associate Registrar (30%), Analyst (40%)

Required Hardware:

The screenshot displays a Windows desktop environment with a blue background. Two windows are open, showing system information for two different servers. The window on the left is titled 'BDMS-WEB' and the window on the right is titled 'BDMS-APP'. Both windows show a list of system properties including Host Name, Boot Time, CPU, IE Version, IP Address, Logon Domain, Logon Server, Machine Domain, Memory, Network Speed, OS Version, Service Pack, Snapshot Time, System Type, User Name, Volumes, and Free Space. The desktop also features several icons: 'Installation Files', 'tnsnames.ora', 'Users_and_...', 'Migrata_Da...', and 'Build.bat'.

Property	BDMS-WEB	BDMS-APP
Host Name:	BDMS-WEB	BDMS-APP
Boot Time:	12/16/2016 11:51 AM	3/24/2017 3:24 PM
CPU:	8 Core 2.50 GHz Intel Xeon(R)E5-2680 v3	8 Core 2.50 GHz Intel Xeon(R)E5-2680 v3
IE Version:	11.0.9600.18538	11.0.9600.18618
IP Address:	10.10.30.109	10.10.30.99
Logon Domain:	AD-UFV	AD-UFV
Logon Server:	LAWSON	LOGAN
Machine Domain:	AD-UFV	AD-UFV
Memory:	16384 MB	16384 MB
Network Speed:	4 Gb/s	4 Gb/s
OS Version:	Windows 2012 R2	Windows 2012 R2
Service Pack:	No service pack	No service pack
Snapshot Time:	12/16/2016 11:55 AM	3/29/2017 3:00 PM
System Type:	Server, Stand-alone, Terminal Server	Server, Stand-alone, Terminal Server
User Name:	rapoportb	rapoportb
Volumes:	C:\ 79.66 GB NTFS	C:\ 99.66 GB NTFS
Free Space:	C:\ 61.24 GB NTFS	D:\ 500.00 GB NTFS
		C:\ 70.35 GB NTFS
		D:\ 350.78 GB NTFS

BDM 8.6 pre-requisites:

- Banner General 8.7.5
- Banner Advancement 8.1
- Banner Finance 8.2
- Banner Financial Aid 8.22
- Banner Human Resources 8.1
- Banner Position Control 8.1
- Banner Student 8.1
- Banner Travel and Expense Management 8.6
- Banner Web Tailor 8.4.2
- Banner Workflow 8.1
- Luminis® Platform IV
- Luminis® Platform 5.0.3
- Ellucian Identity Service (if implementing SAML2) 1.0.0

Installation of BDM - steps

- Install ApplicationXtender 7.0
- Install BDM 8.6
- Install ApplicationXtender Web Access .NET 7.0
- Upgrade ApplicationXtender and Web Access .NET 7.0.1055 (SP1)

Components

BDMS-APP:

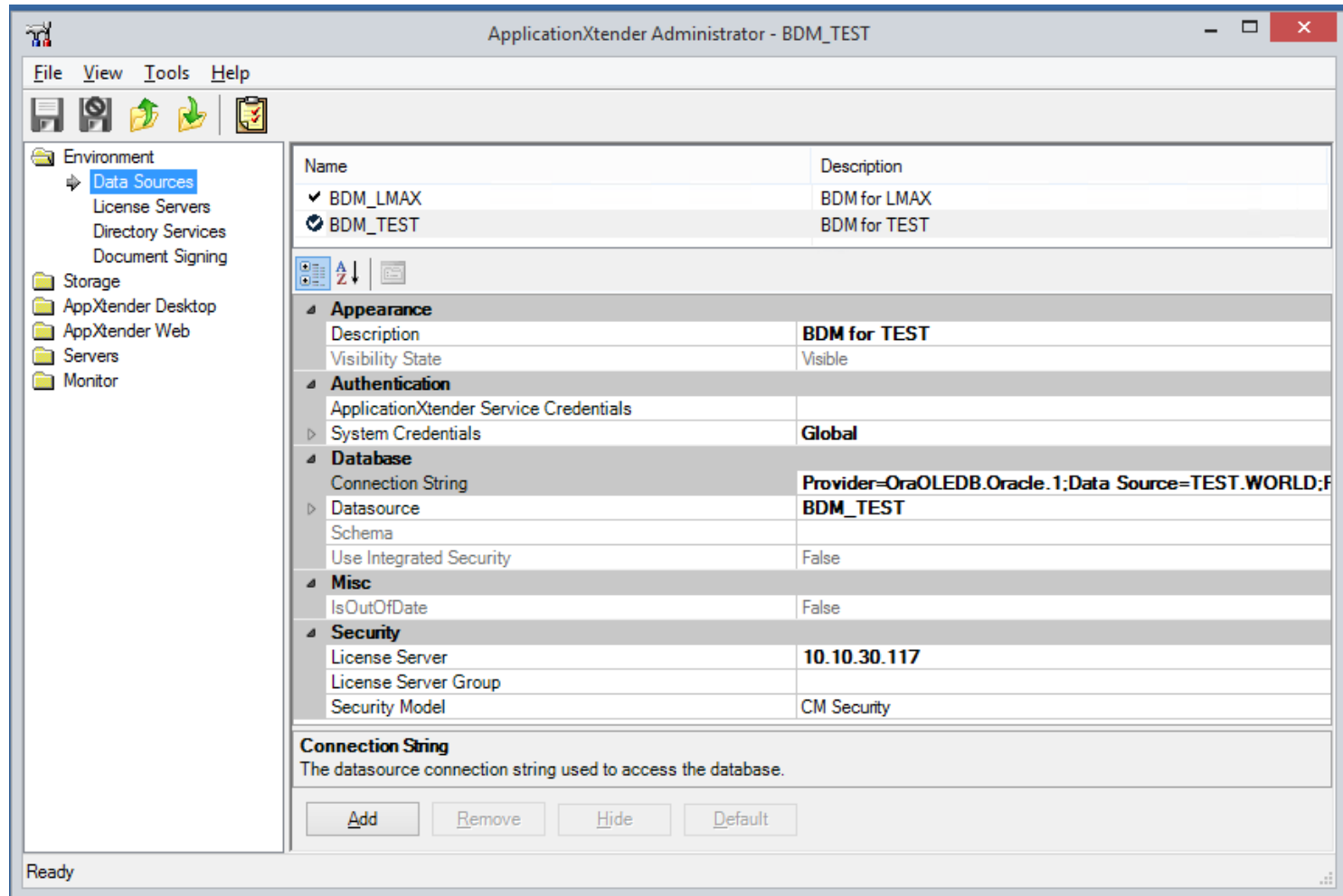
- Application Server
- License Server
- Storage (Repository)

BDMS-WEB:

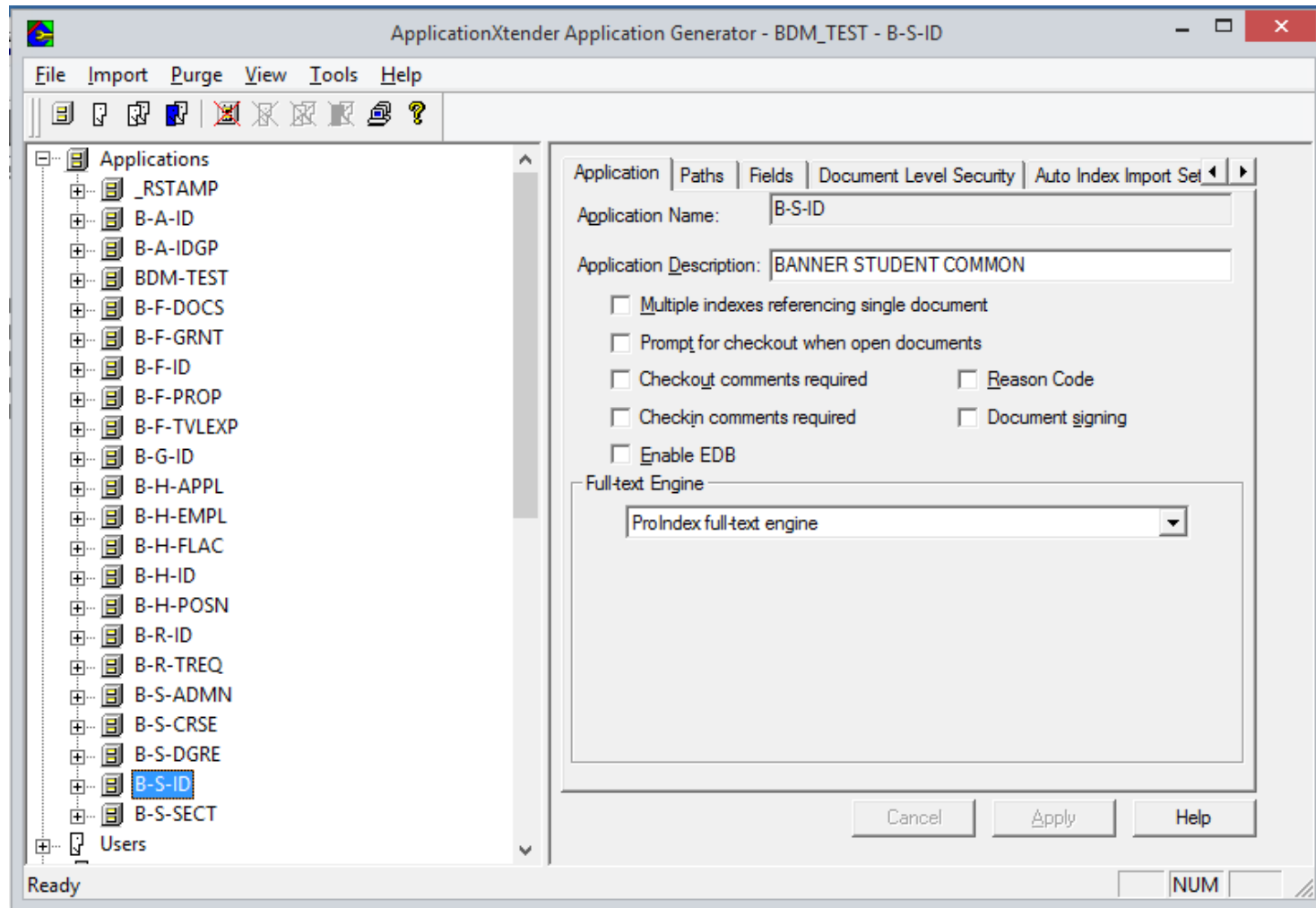
- Web Server
- Render Server Cache
- Web Access Session Cache
- Web Services Cache

Install BDM 8.6

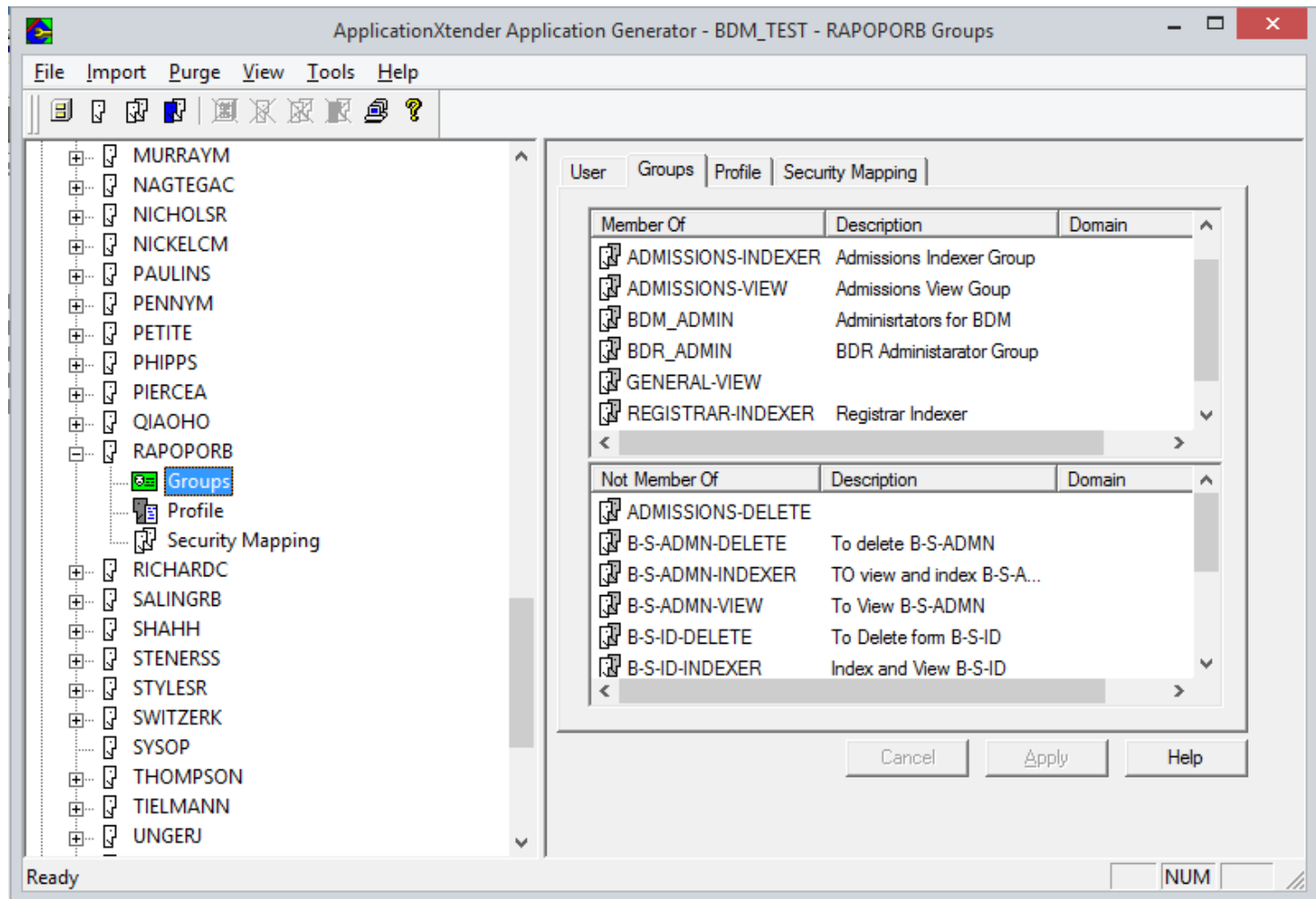
Testing

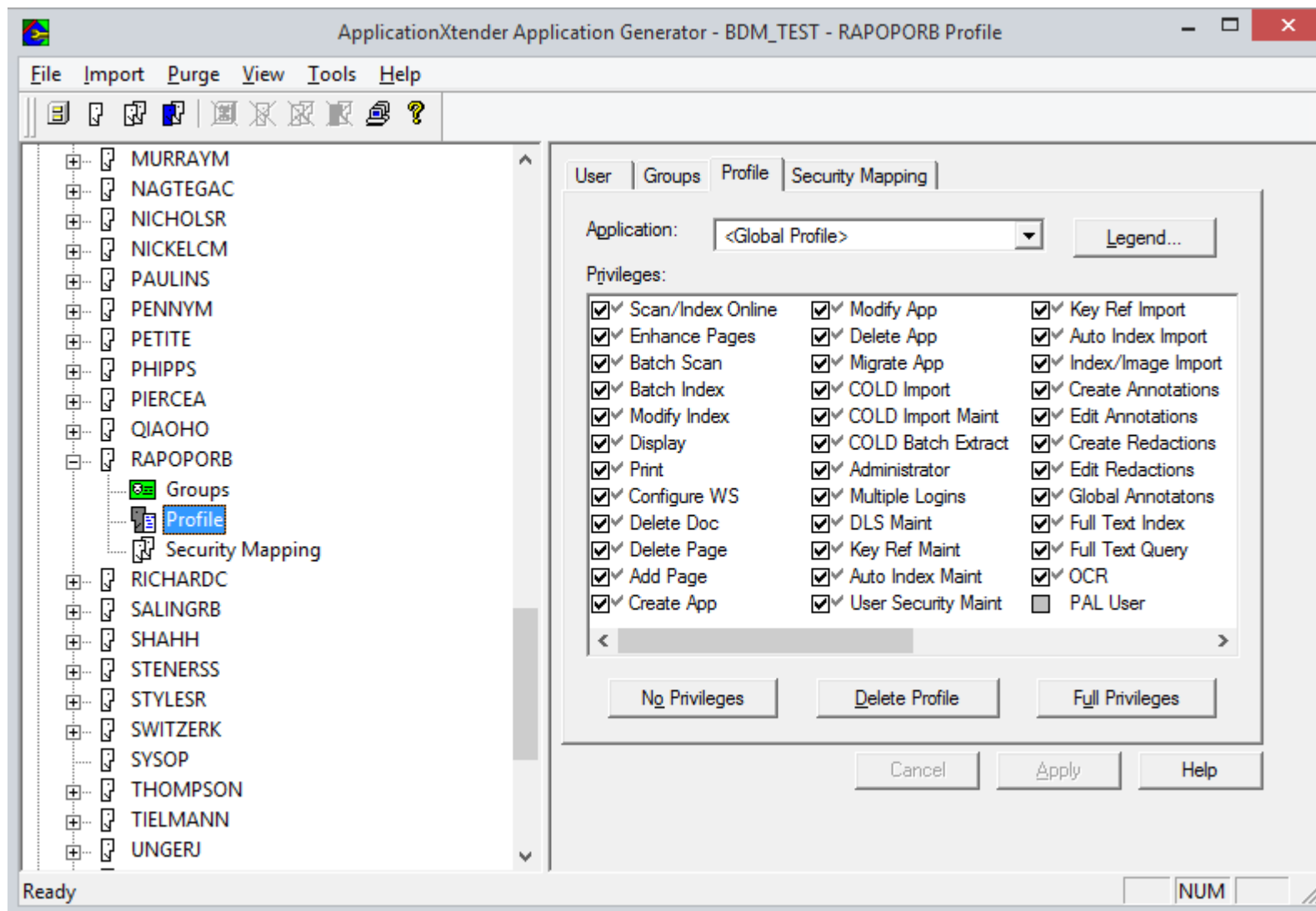


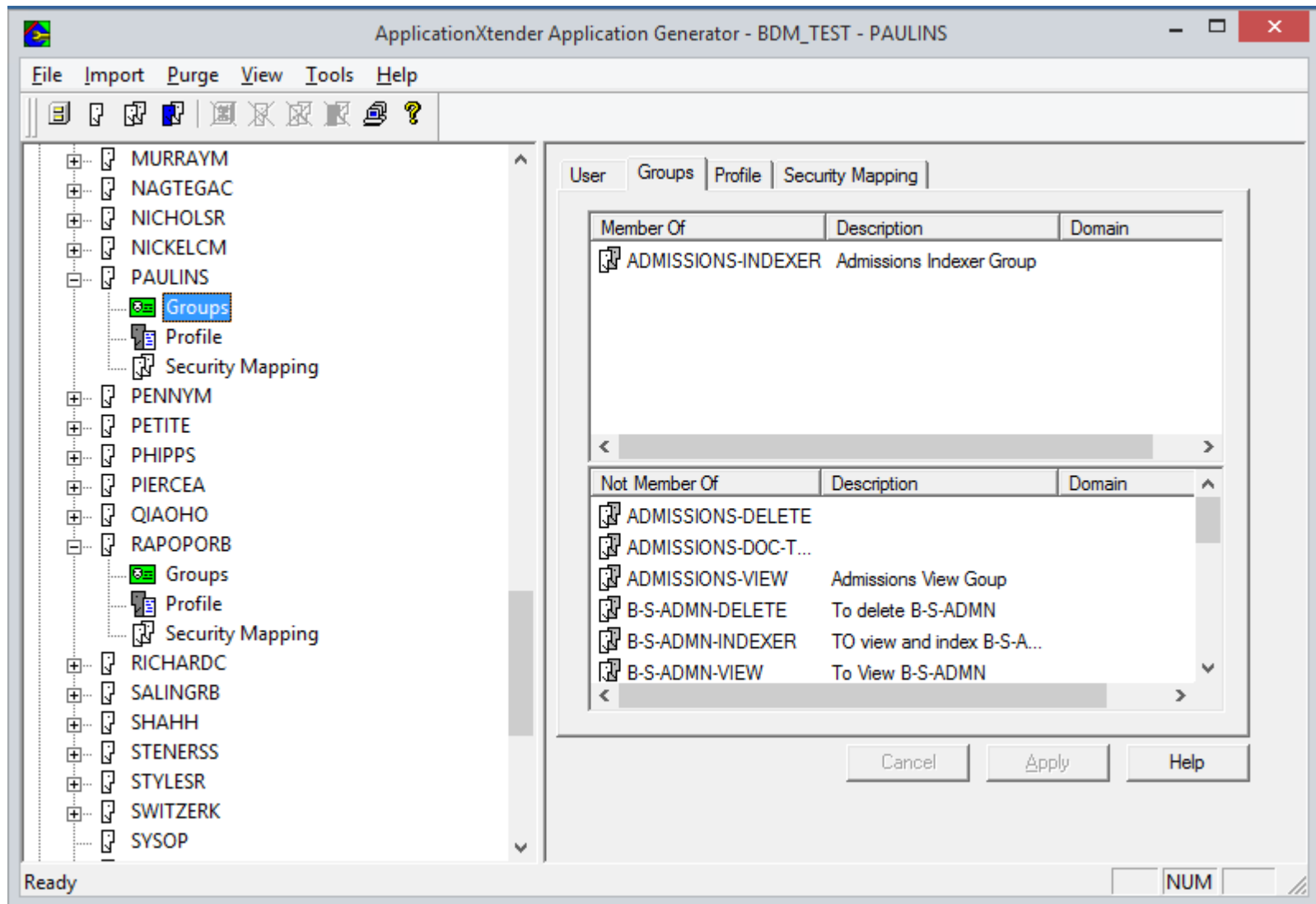
Applications

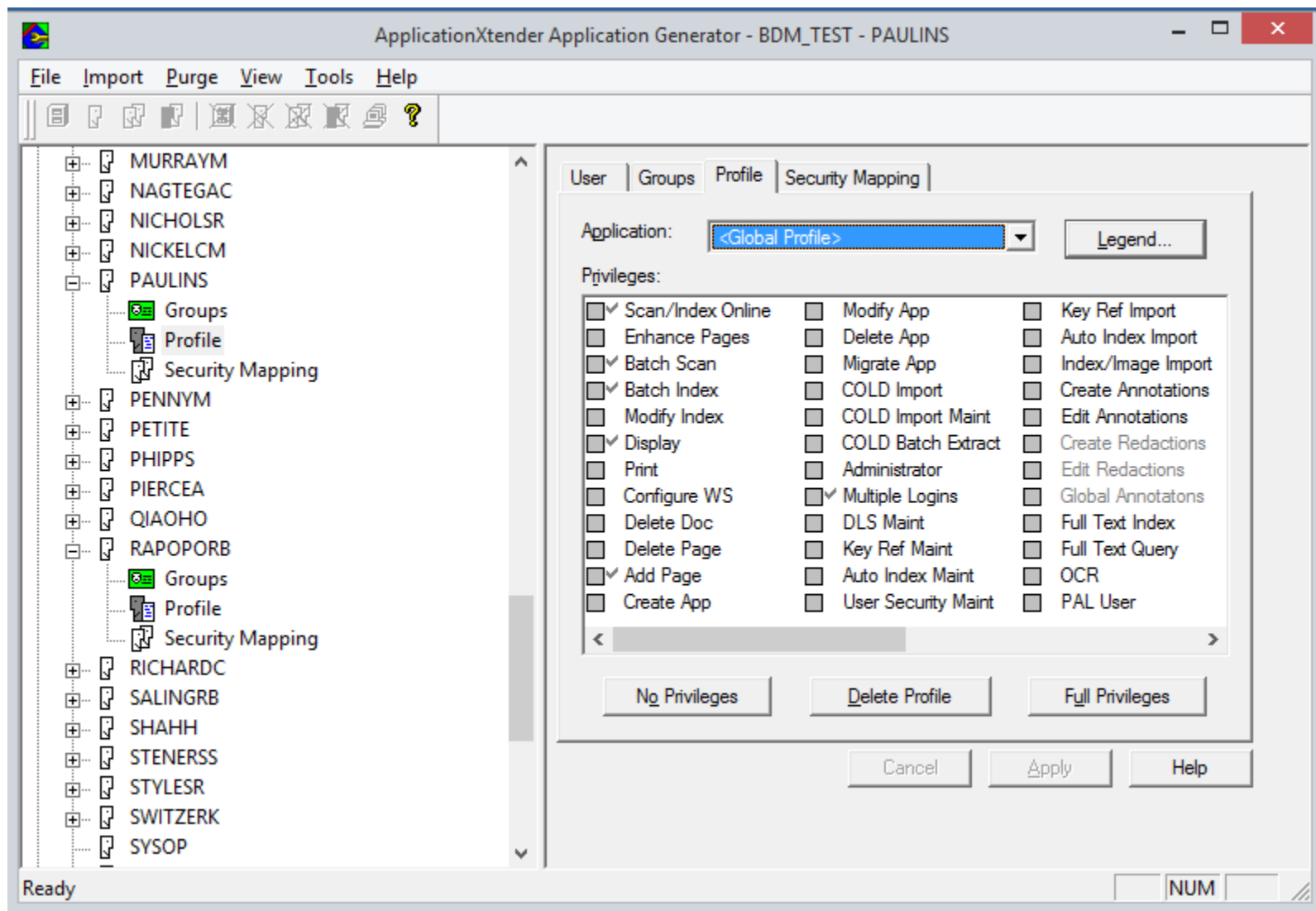


Users

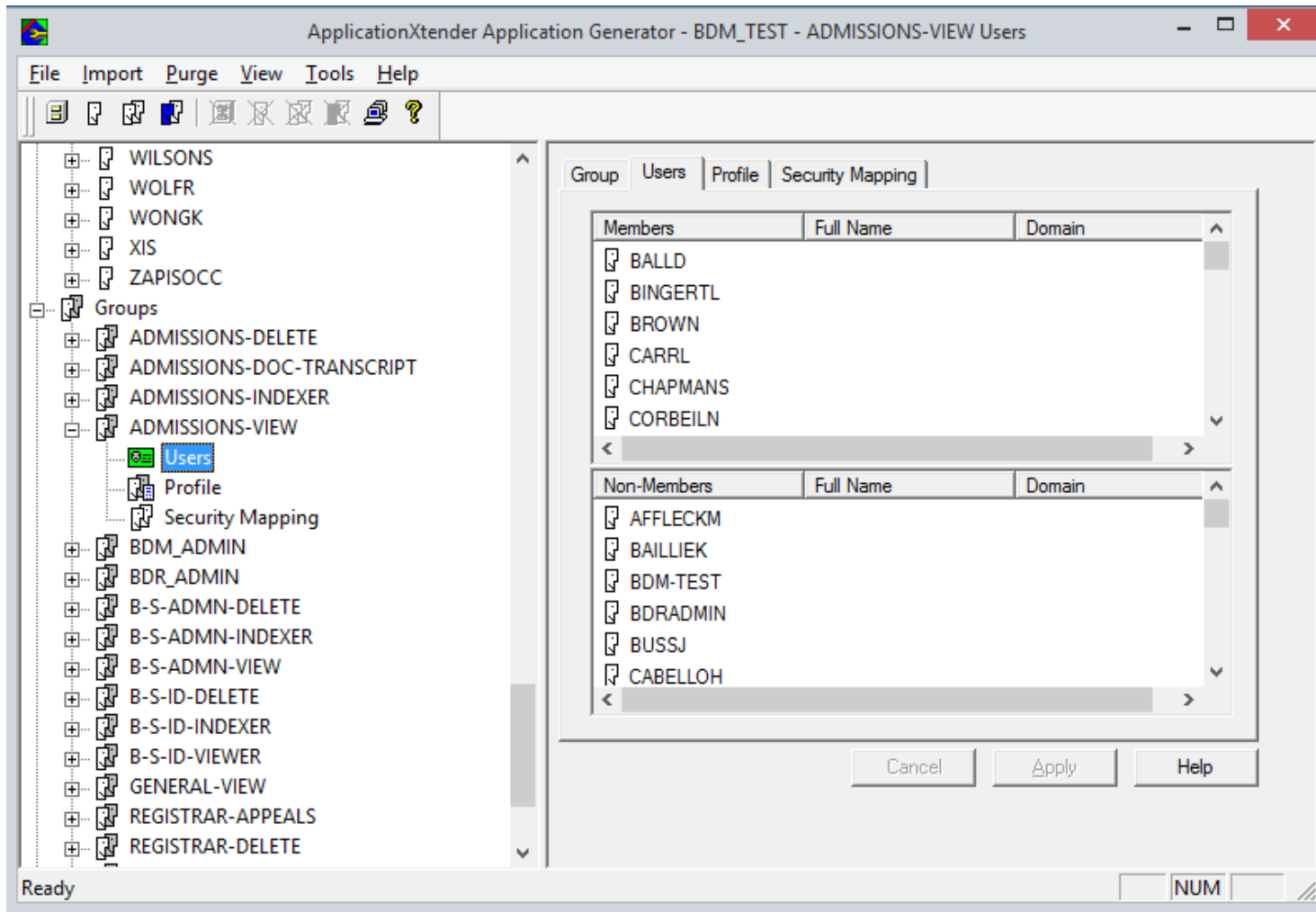


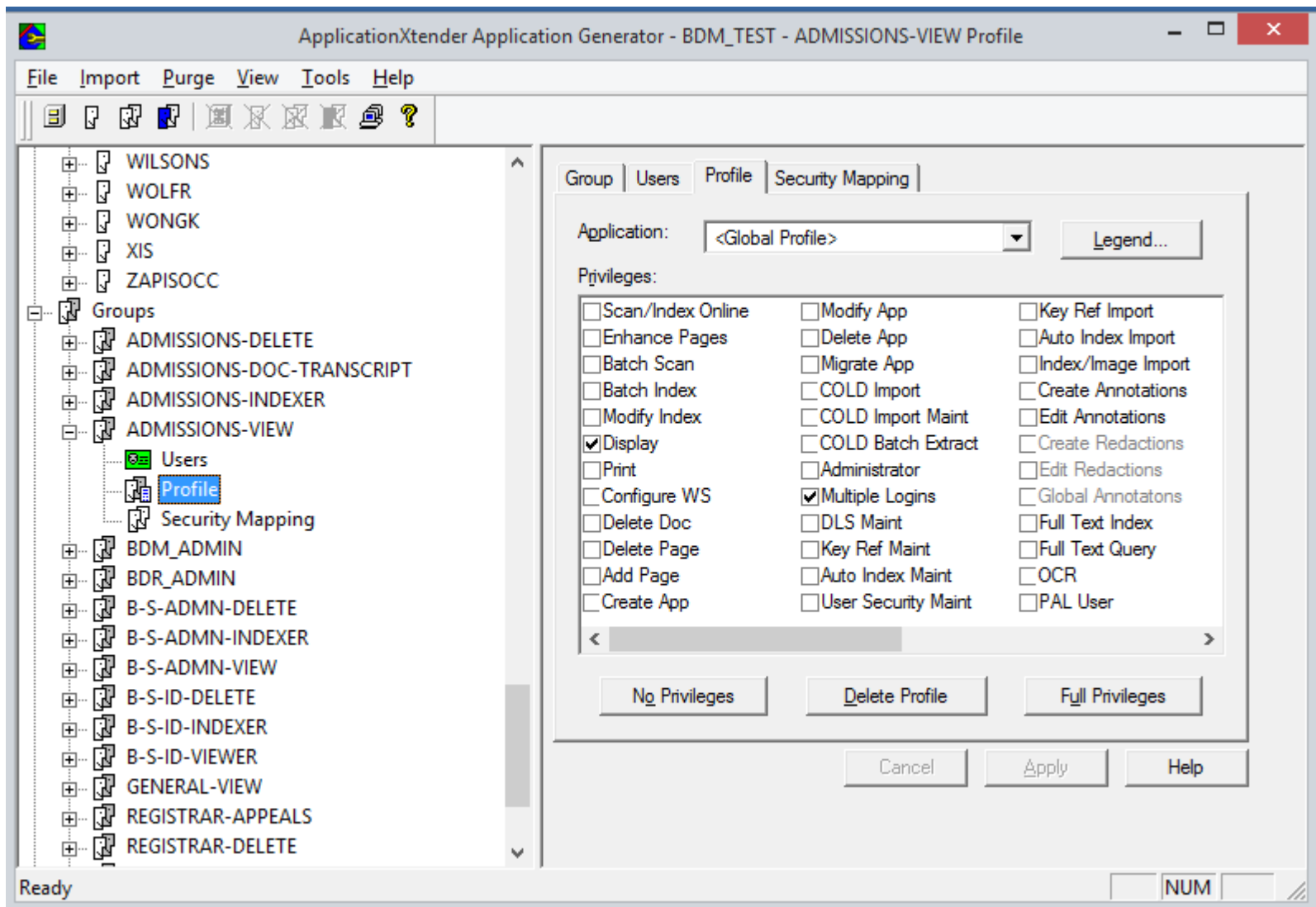


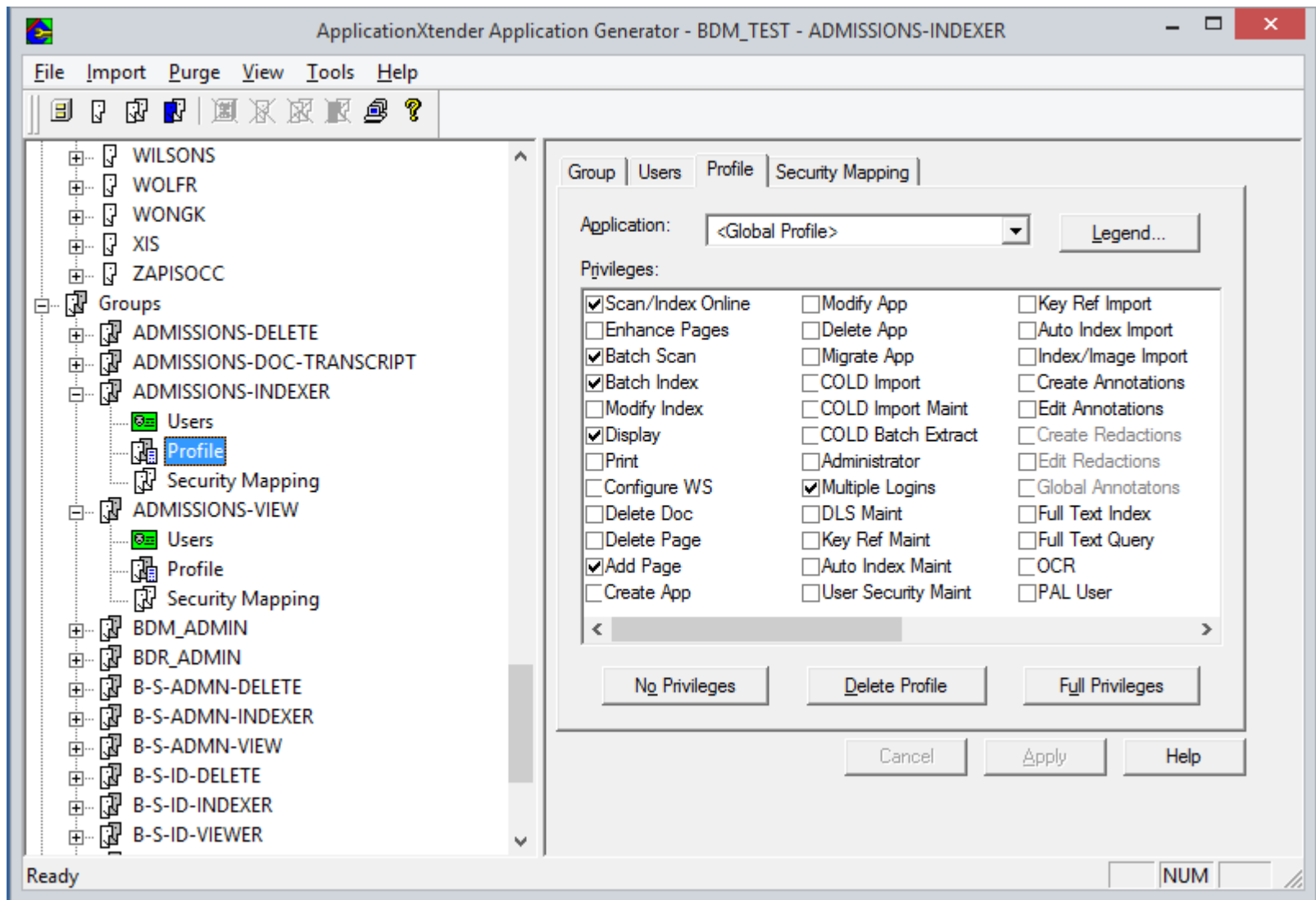



































Groups







Legacy Data Migration

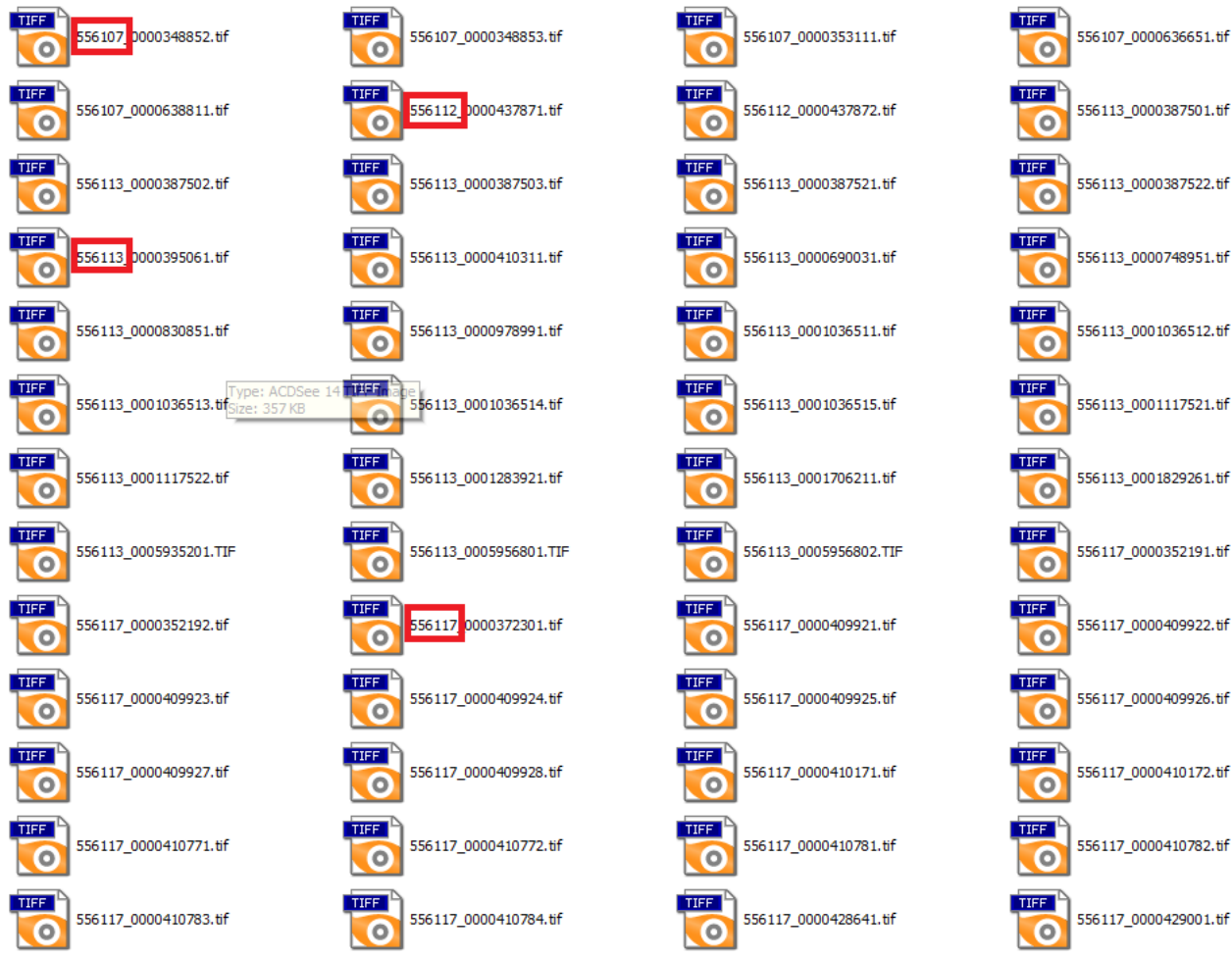
Name ^	Size	Type	Date modified	Date created
 _		File folder	15/01/2005 6:31 AM	15/01/2005 6:31 AM
 _3		File folder	08/08/2012 3:02 AM	08/08/2012 3:02 AM
 _4		File folder	21/09/2005 8:23 AM	21/09/2005 8:23 AM
 _5		File folder	18/11/2005 4:18 AM	18/11/2005 4:18 AM
 _6		File folder	18/05/2006 5:38 AM	18/05/2006 5:38 AM
 _7		File folder	13/07/2010 7:50 AM	13/07/2010 7:50 AM
 _8		File folder	10/02/2005 8:09 AM	10/02/2005 8:09 AM
 _9		File folder	16/02/2006 8:07 AM	16/02/2006 8:07 AM
 10		File folder	15/01/2005 5:00 AM	15/01/2005 5:00 AM
 11		File folder	15/01/2005 5:03 AM	15/01/2005 5:03 AM
 12		File folder	15/01/2005 5:06 AM	15/01/2005 5:06 AM
 13		File folder	15/01/2005 5:09 AM	15/01/2005 5:09 AM
 14		File folder	15/01/2005 5:11 AM	15/01/2005 5:11 AM
 15		File folder	15/01/2005 5:14 AM	15/01/2005 5:14 AM
 16		File folder	15/01/2005 5:17 AM	15/01/2005 5:17 AM
 17		File folder	31/03/2005 10:30 AM	31/03/2005 10:30 AM
 51		File folder	22/11/2007 9:15 AM	22/11/2007 9:15 AM
 52		File folder	15/01/2005 5:29 AM	15/01/2005 5:29 AM
 53		File folder	15/01/2005 5:37 AM	15/01/2005 5:37 AM
 54		File folder	15/01/2005 5:53 AM	15/01/2005 5:53 AM
 55		File folder	15/01/2005 6:17 AM	15/01/2005 6:17 AM
 56		File folder	22/12/2005 3:56 AM	22/12/2005 3:56 AM
 57		File folder	24/04/2007 11:26 AM	24/04/2007 11:26 AM
 58		File folder	08/09/2008 7:30 AM	08/09/2008 7:30 AM
 59		File folder	22/10/2009 3:16 AM	22/10/2009 3:16 AM
 60		File folder	08/11/2010 7:07 AM	08/11/2010 7:07 AM
 61		File folder	22/12/2011 7:04 AM	22/12/2011 7:04 AM
 62		File folder	25/01/2013 4:03 AM	25/01/2013 4:03 AM
 63		File folder	14/03/2014 6:21 AM	14/03/2014 6:21 AM
 64		File folder	10/07/2015 4:48 AM	10/07/2015 4:48 AM
 65		File folder	12/09/2016 7:39 AM	12/09/2016 7:39 AM

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Directory	Migrated records, PROD		Migrated records, LMAX
03	1,882		1,879
04	11,075		11,052
05	7,990		7,971
06	7,929		7,925
07	9,333		9,312
08	9,063		9,041
09	12,500		12,476
10	16,057		16,021
11	18,413		18,381
12	23,012	10.02-10.22 (20 min)	22,972
13	24,414	10.22-10.34 (12 min)	24,391
14	32,531	(19 min)	32,475
15	40,188	10.48-11.11 (32 min)	40,153
16	52,690	11.23-11.55 (32 min)	52,637
17	45,973		45,940
51	52,762		52,686
52	60,862		60,821
53	88,165		88,118
54	88,527	22.27-23.40 (76 min)	87,916
55	101,190	14.22-15.58 (96 min)	101,082
56	110,068	13.13-14.20 (67 min)	109,962
57	115,781	11.56-12.59 (63 min)	115,645
58	108,375	16.00-17.03	108,178
59	109,987	17.05-18.11 (66 min)	109,555
60	104,027	18.13	103,552
61	92,238	20.50	91,499
62	74,745		74,056
63	43,415		42,757
64	27,272	8.13-8.33 (30min)	26,292
65	18,813	8.34-8.48 (14 min)	16,229
66	5,218	8.49-8.53	23

**Migrated about
1,500,000 files,
135GB of data.**

Production Release

- Extensive testing in dedicated Test environment
- User training sessions – OREG, International Ed & Student Services
- Exported/Imported Applications and Users settings from Test to Prod
- 160+ hours to copy and index legacy images
- Desktop packages remotely deployed
- Some legacy system users added manually in PROD - ongoing
- Banner-based authentication
- Legacy system decommissioned after 2 months in parallel

Post-Release Steps

- Fine-tuning of users rights and privileges
- Document-level security (DLS)
- Desktop package installs as needed
- Using existing Multi-Functional Devices (batch and individual documents)
- Dedicated scanner connected (not yet in use)

Document Management in OREG

- Legacy DM in office of Registrar (OREG) at UFV:
 - “Home grown” document storage system
 - Was useful and a good introduction to EDMS
 - Limitations in system design and function
 - Limited IT support and high risk of failure
- Redefining the objectives:
 - Create a paperless office
 - Save on storage space
 - Have quick and easy access to documents
 - Improve Customer Service
 - Minimise document loss

Business Change

- Why BDMS
 - Integrated with Banner system
 - On-going maintenance of Integration
 - Many people can access the application and enter documents
 - Not limited to one machine/workstation
 - Store any electronic document (Word, Excel, Audio, Video etc.)

Business Process Review

- Business Process Review
 - Which documents are scanned
 - Using MFD's
 - Creating document types
 - User Documentation
 - User Training
 - Scanning, Indexing, Moving, Append, Delete, Querying

BDMS in OREG

- Benefits of BDMS in Office of Registrar at UFV
 - Quick access to documents via Banner
 - Reduced data entry
 - Reduce paper (Archiving)
 - No need to have lots of Filing Cabinets wasting floor space
 - View and add documents anywhere
 - Can be used in every office on Campus
 - Increased operational efficiencies
 - Increased customer satisfaction

Document Security

- Security
 - Single Sign On from Banner
 - Banner Security extends to BDMS
 - Its ability to create user groups and then assign certain privileges to those groups
 - Security privileges can be setup on documents
- Future Steps for OREG
 - Using Banner document Retention (BDR)
 - BDMS integration with Banner Workflow

Future Phases

- Expand to Student Services (presently, read-only):
 - Disability Resource Centre
 - Counselling
 - Financial Aid and Awards
 - Qualifying Advising
 - Student Residence
 - Student Life
- Expand to Athletics and Career Centre
- Expand to International Education and Advising Centre

Future Phases

- Expand to Finance and HR:
 - Budgeting
 - Approach planning
 - Electronic Document Management concept introduction
 - BDMS demo sessions with Ellucian and OREG
 - Business requirements gathering and analysis
 - User training
 - Infrastructure scaling
 - Licensing levels review

Future Phases

- Document Retaining
 - Institutional Policies
 - Retaining rules per document type
 - Approval workflows
 - System configuration
- Support
 - Wiki pages and user documentation
 - Change Management

Contacts

- Felix Aksentsev, Manager, ITS Applications
 - Felix.Aksentsev@ufv.ca
 - 604-864-4618
- Akhtar Malik, Associate Registrar – Systems and Schedules
 - Akhtar.Malik@ufv.ca
 - 604-851-6365
- Boris Rapoport, Systems Analyst, ITS
 - Boris.Rapoport@ufv.ca