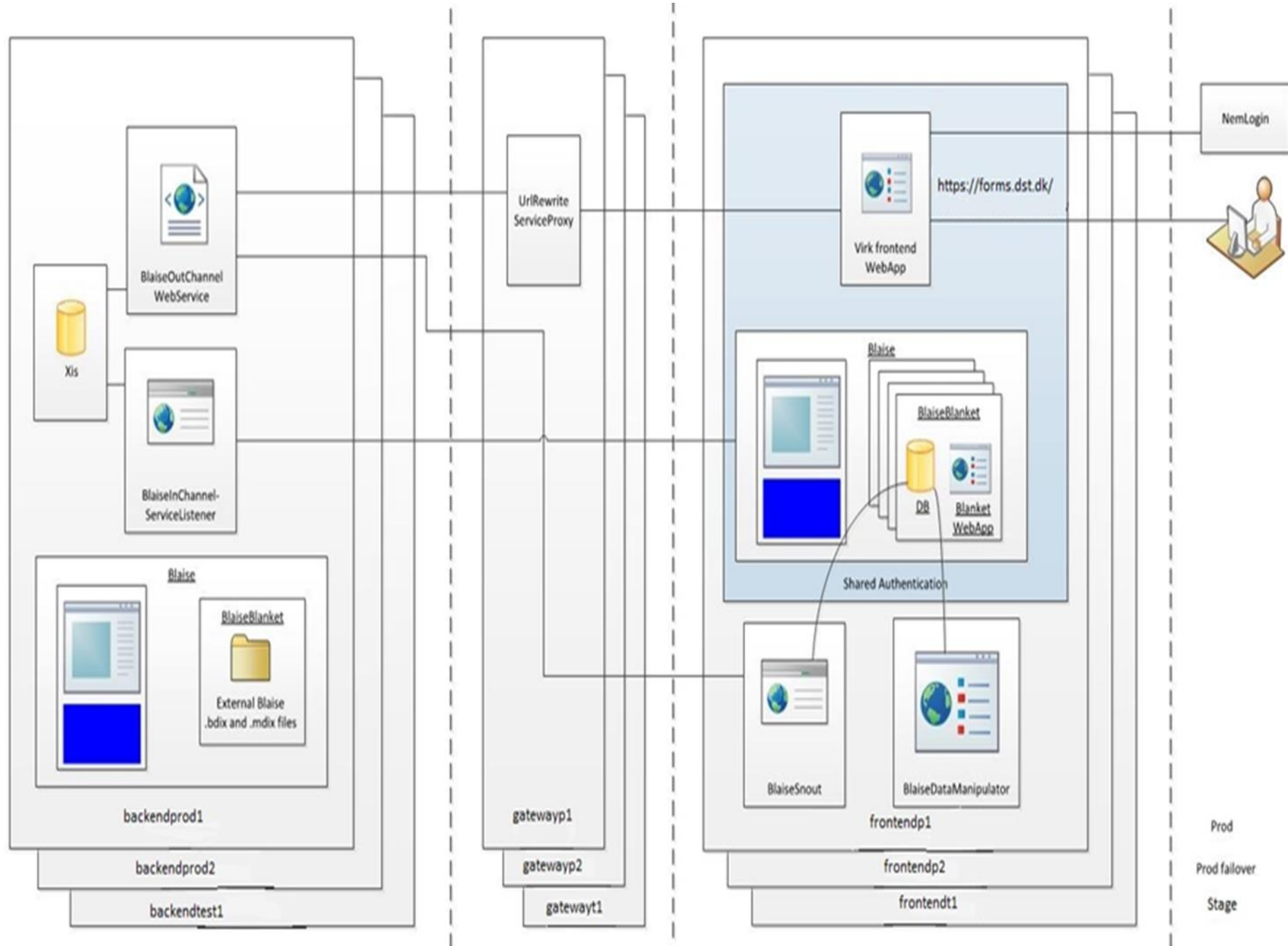
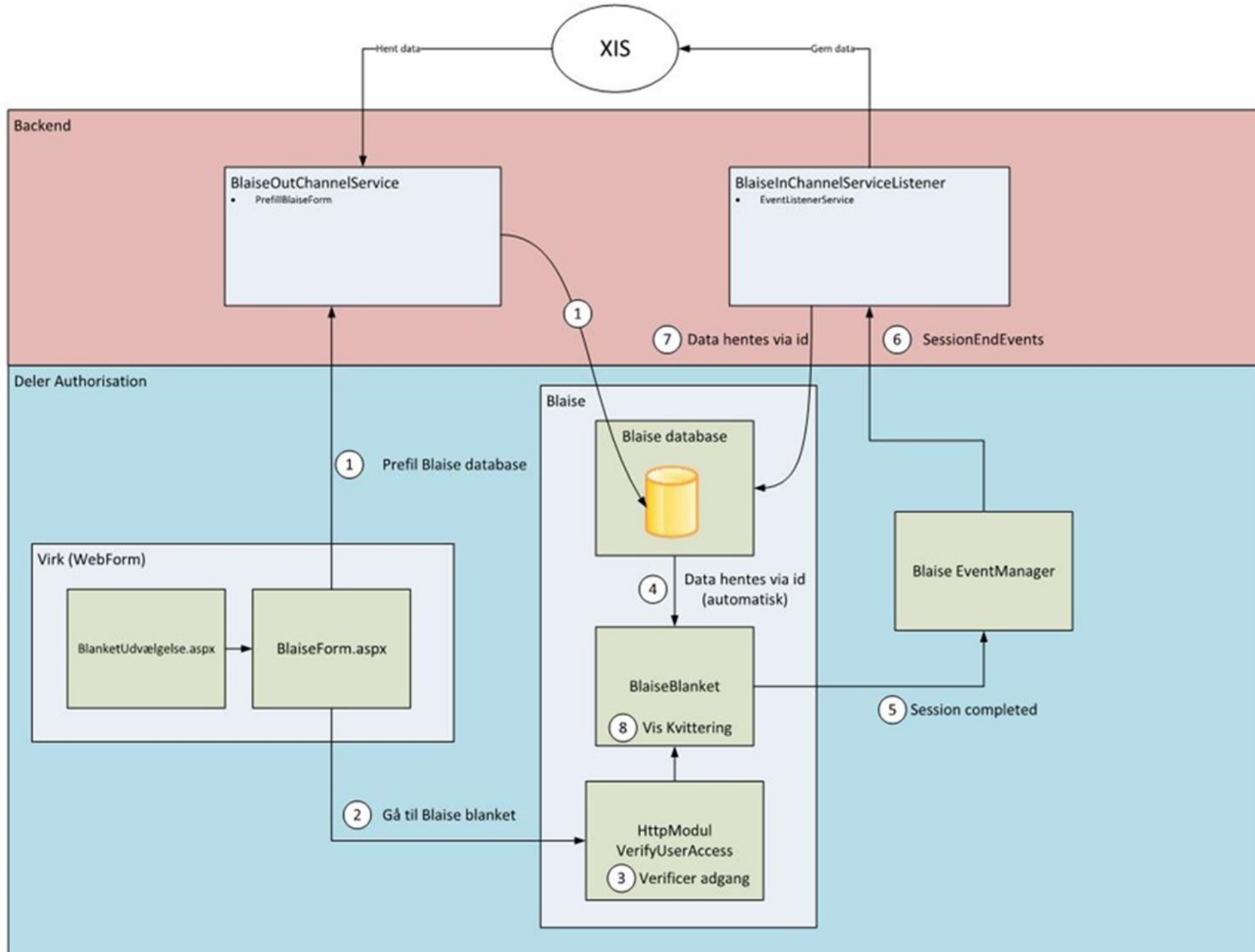


Managing a complex infrastructure for the collection of business report forms

Using a general web service for installing surveys and
other operations needed to administer Blaise 5 servers

Leif Bochis Madsen, Statistics Denmark, August 2020





Environments

Environment	Test/Prod	EnvType	BACKEND	COMMON	FRONTEND	FW	COMMON	FRONTEND
VIRKTEST	TEST	VIRK	backendtest1		frontendtest1			
LINKTEST	TEST	LINK	backendtest1		linktest1			
VIRKSTAGE	TEST	VIRK	backendtest2					frontendtest2
VIRKPROD1	PRODUKTION	VIRK	backendprod1					frontendprod1
LINKPROD	PRODUKTION	LINK	backendprod1					linkprod1
VIRKPROD2	PRODUKTION	VIRK	backendprod2					frontendprod2
INTERNTEST	TEST	INTERN		interntest				
INTERNPROD	PRODUKTION	INTERN		internprod				
BlaiseTest2	TEST	BLAISE					blaisetest2	
Blaiseprod2	TEST	BLAISE					blaiseprod2	
Blaiseprod3	TEST/PROD	BLAISE					blaiseprod3	
Blaiseprod4	PRODUKTION	BLAISE					blaiseprod4	
Blaiset3	PRODUKTION	BLAISE					blaiset3	
Blaise2	TEST/PROD	BLAISE		blaise2				

Server administration: Tasks

We want to:

- Install surveys
- Upload supplementary files to servers
- Get info about currently installed surveys
- Get overview of servers
- Get info about Blaise versions installed on servers
- Update Blaise licenses
- Update services
- Etc.

Example: Install survey in BSS environment

On Backend:

- Upload package file to backend server
- Extract bmix file and manifest file
- Remove existing installation (possibly)
- Install on frontend server (using ServerManager.exe)
- Create external bdix on backend server (using Blaise API)

On Frontend:

- Modify survey (include http module)

Implementation: Overview

- Technology: Basic .NET, no Blaise API (yet)
- Data extracted from:
 - Registry (Blaise, basic information)
 - Folders and files (e.g. the Surveys subfolders)
- Same WCF service installed on all servers, 17 different end point addresses
- Client console application transfers all requests into operations on the relevant server(s)
- A GUI makes it easy to access the different requests

Implementation: Service

- General WCF service exhibits:
 - Upload packages
 - Install packages
 - Modify survey
 - Extract info (survey, server, ...)
 - Update Blaise license key
 - Update service
 - Etc.

Implementation: Client application

- Client application implements:
 - Knowledge of the different environments
 - Knowledge of the server names
 - Knowledge of the combined operations needed, e.g. to install a survey in a specific type of environment
 - Etc.

Overview of servers

Oversigt over RAMBLA-servere (i alt 17 stk.)

Oversigt genereret: 12. februar 2020 kl. 11:05

SERVERE

servernavn	status, service	OS	Blaisever.	serverpark	servertype
backendtest1	RamblaServices.dll, build: 10-01-2020 16:59:22	Windows Server 2008 R2 Standard	5.6.9.2082	LocalDevelopment	VIRK+LINK/BACKEND
frontendtest1	RamblaServices.dll, build: 10-01-2020 16:59:22	Windows Server 2016 Standard	5.6.9.2082	Production	VIRK/FRONTEND
backendprod1	RamblaServices.dll, build: 10-01-2020 16:59:22	Windows Server 2008 R2 Standard	5.5.3.1862	LocalDevelopment	VIRK+LINK/BACKEND
frontendprod1	RamblaServices.dll, build: 10-01-2020 16:59:22	Windows Server 2016 Standard	5.5.3.1862	Production	VIRK/FRONTEND
linkprod1	RamblaServices.dll, build: 10-01-2020 16:59:22	Windows Server 2016 Standard	5.5.7.1883	Production	LINK/FRONTEND
internprod	RamblaServices.dll, build: 10-01-2020 16:59:22	Windows Server 2016 Standard	5.6.9.2082	Production	INTERN/COMMON
blaisetest2k	RamblaServices.dll, build: 10-01-2020 16:59:22	Windows Server 2012 R2 Standard	5.6.9.2082	Production	CLASSIC/COMMON
blaiseprod3	RamblaServices.dll, build: 10-01-2020 16:59:22	Windows Server 2012 R2 Standard	5.5.11.1902	Production	CLASSIC/COMMON
blaiseprod4	RamblaServices.dll, build: 10-01-2020 16:59:22	Windows Server 2016 Standard	5.6.5.2055	Production	CLASSIC/COMMON

Overview of instruments in one environment

VIRKTEST - frontendtest1 / backendtest1 (VirkBlanket)

Oversigt genereret: 12. februar 2020 kl. 15:54

BLANKETTER

Blanket	ID	Inst.dato	Forb.dato	Blaisever.	Backend
bba2019a	5188651a-6ab2-4987-b209-8678b8697004	06-05-2019 16:45:05	06-05-2019 16:41:55	5.5.3.1862	OK: bba2019a, ...
bba2019b	dde95a45-4935-4bfb-b07e-ac5cb8fea61a	19-11-2019 09:44:17	19-11-2019 09:42:44	5.5.8.1886	OK: bba2019b, ...
blaisetestv5	e0682b17-3241-4239-95ae-4200254e9b09	01-10-2019 16:16:52	20-05-2019 12:41:06	5.5.3.1862	OK: blaisetestv5, ...
doi	86451a56-1e58-4f13-b2c3-918ec5465fc8	27-02-2019 11:57:35	27-02-2019 11:21:33	5.5.3.1862	OK: doi, ...
doi2019b	968afd90-0d15-4d49-8873-b1077d4e9cbc	10-12-2019 11:22:56	10-12-2019 11:14:20	5.5.8.1886	OK: doi2019b, ...
ipo	58ee31bb-5d00-4f63-9911-6eba4f507512	29-01-2020 17:57:44	29-01-2020 17:56:59	5.5.8.1886	OK: ipo, ...
ipo2020a	b9952956-bb8e-4230-98de-8dff7cc2ee65	29-01-2020 18:20:07	29-01-2020 18:17:11	5.5.8.1886	OK: ipo2020a, ...
ipo2020b	22733f6a-83ef-49b1-ae78-162c7dcf1332	04-02-2020 11:32:37	04-02-2020 11:31:34	5.5.8.1886	OK: ipo2020b, ...
lvs	5bc0d93f-b8e9-4639-8a47-652fd5ad87c5	11-12-2019 13:27:03	11-12-2019 13:23:06	5.5.8.1886	OK: lvs, ...

Overview of one instrument on all servers

Oversigt genereret: 13. februar 2020 kl. 11:22

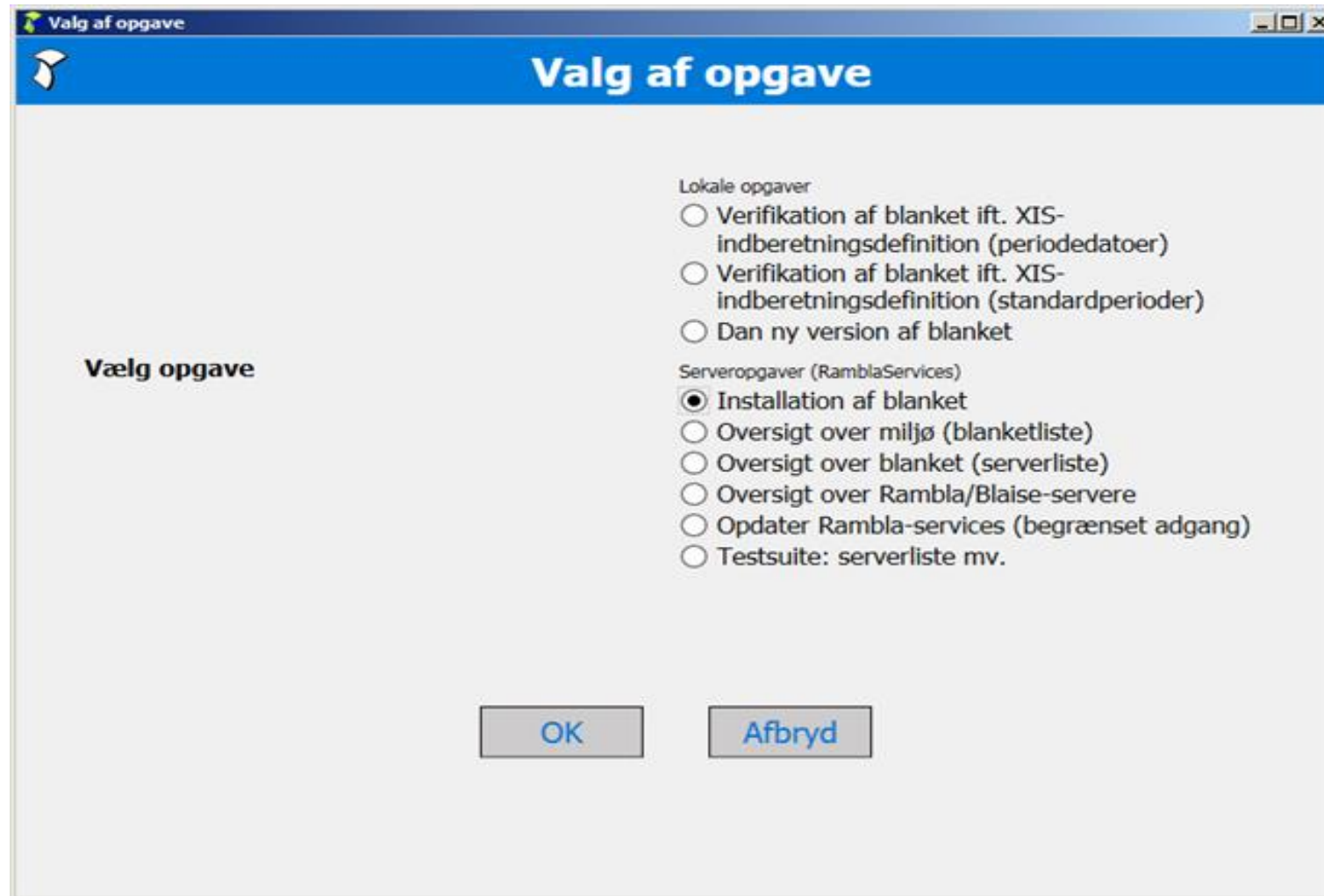
BLANKETTEN 'doi*' PÅ TEST-SERVERE

Server	Navn	ID	Inst.dato	Forb.dato	Blaisever.	Servertype	Blankettype	Miljø
backendtest1	doi	86451a56-1e58-4f13-b2c3-918ec5465fc8	27-02-2019 11:57:41	27-02-2019 11:21:32		BACKEND	VirkBlanket	VIRKTEST
backendtest1	doi2019b	968afd90-0d15-4d49-8873-b1077d4e9cbc	10-12-2019 11:22:58	10-12-2019 11:14:20		BACKEND	VirkBlanket	VIRKTEST
frontendtest1	doi	86451a56-1e58-4f13-b2c3-918ec5465fc8	27-02-2019 11:57:35	27-02-2019 11:21:33	5.5.3.1862	FRONTEND	VirkBlanket	VIRKTEST
frontendtest1	doi2019b	968afd90-0d15-4d49-8873-b1077d4e9cbc	10-12-2019 11:22:56	10-12-2019 11:14:20	5.5.8.1886	FRONTEND	VirkBlanket	VIRKTEST
backendtest1	doi2019b	968afd90-0d15-4d49-8873-b1077d4e9cbc	10-12-2019 11:23:20	10-12-2019 11:14:20		BACKEND	LinkBlanket	LINKTEST
linktest1	doi2019b	968afd90-0d15-4d49-8873-b1077d4e9cbc	10-12-2019 11:23:18	10-12-2019 11:14:20	5.5.8.1886	FRONTEND	LinkBlanket	LINKTEST
interntest	doi	86451a56-1e58-4f13-b2c3-918ec5465fc8	01-03-2019 10:37:19	27-02-2019 11:21:33	5.5.3.1862	COMMON	InternBlanket	INTERNTEST
interntest	doi2019b	968afd90-0d15-4d49-8873-b1077d4e9cbc	11-12-2019 15:48:02	10-12-2019 11:14:20	5.5.8.1886	COMMON	InternBlanket	INTERNTEST

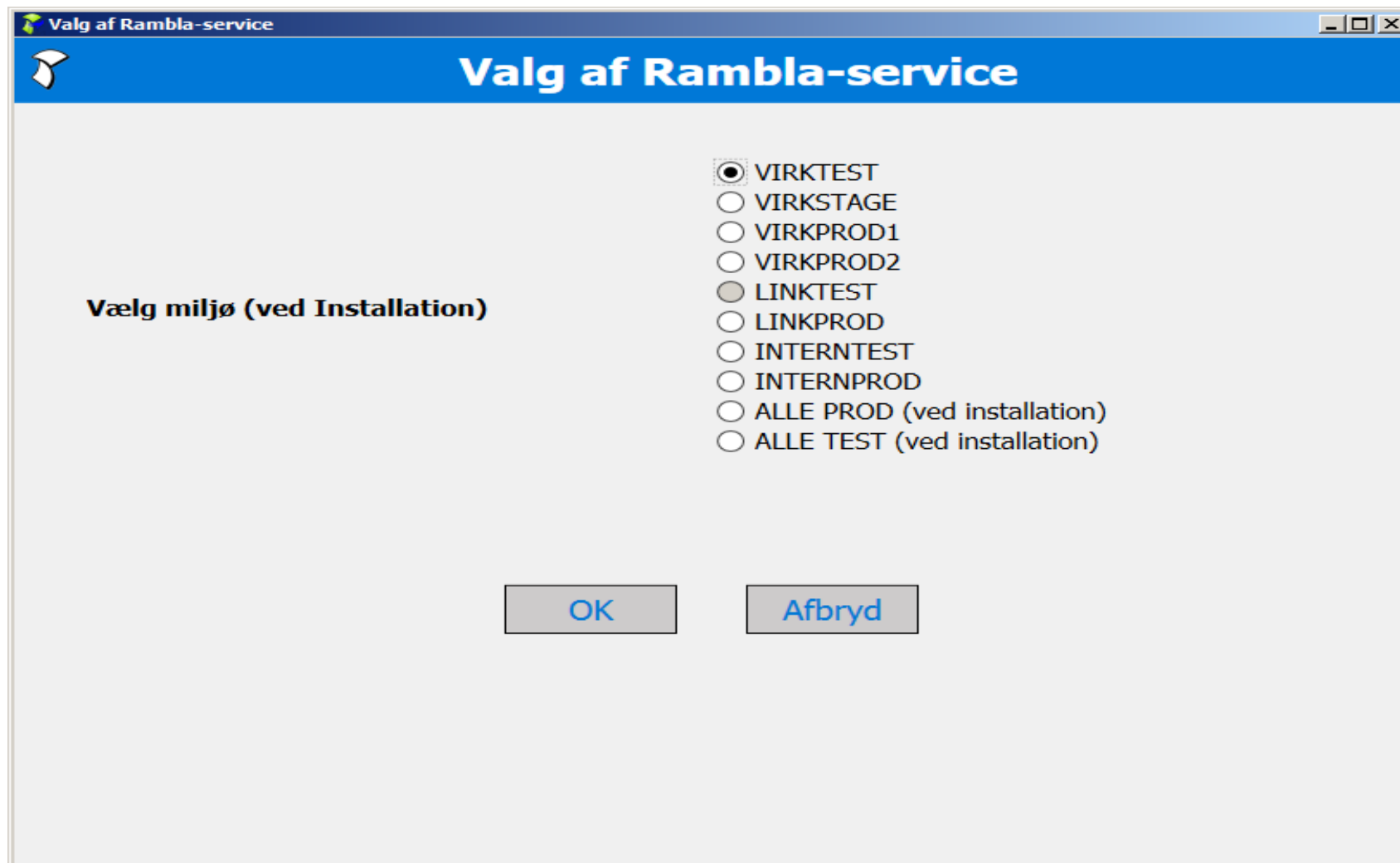
GUI – Interface for survey administration

- Technology: Manipula
- Implements a selection of tasks
- Example: Questionnaire designers can install surveys easily
 - Select 'Install' operation
 - Select Environment(s)
 - Select package file

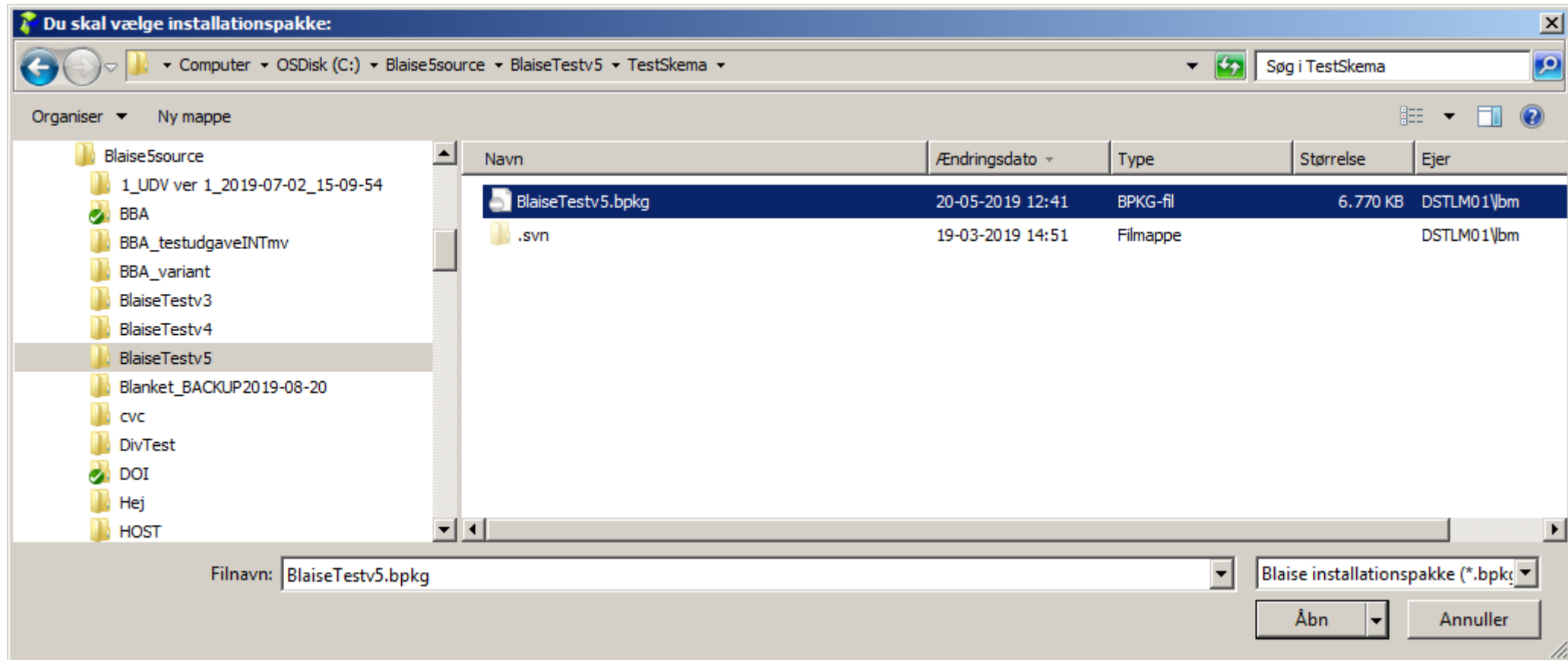
GUI – task selector



Install: Select environment(s)



Install: Select package file (.bpkg)



Security issues

- Firewall settings
 - Prevent external access to services
 - Reserve internal access to relevant users
- Future:
 - Allow only access to services from a specific server
 - This server implements fine-grained access control

Current Status

- The system is in production and supports the needed tasks
- Requests may be run
 - in a specific environment
 - in all test environments
 - in all production environments
 - in all environments
- We have recently upgraded all servers to Blaise 5.7
 - No changes were needed 😊
- Still new ideas turn up, but...
- Our focus is now on automatic generation of questionnaires

Thank you for listening!

For more information:

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