

Converting Any Ingres ABF
Application Into Modern
Software, Effort-Free

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RAM/RAD White Paper

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Rapid Application Development Kit >

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Overview

RAM/RAD is Gesto Ansur's integrated enterprise product line for quick application development and deployment. One of its major features is the capability to import legacy applications built on top of Ingres ABF systems and dependencies to then, automatically, produce a modern application, which can either be built on standard web technological stacks or be exposed for use in other applications via secure APIs. The resulting application works with all popular databases.

RAM/RAD's capabilities allow you to quickly set up, manage and support your enterprise applications in environments not previously possible, while allowing development to continue in either the original codebase or the new one using the built-in modern UX/UI tools.

Introduction

Our company has for the past four years worked on different prototypes that could revitalize our customers' legacy applications. This wasn't an easy task, as the Ingres ecosystem provides many functionalities, between form building (ABF/vifred), scripting language (4GL), printing templates (RW), and obviously the database itself. In late 2019 we reached a breakthrough and have actively iterated over this prototype since, which now powers our customers different projects and needs.

Regardless of the different goals each customer has, one thing they all agreed on is that no one wants to pay to rewrite nearly two decades of accrued business logic.

And yet, one only frets over something when trying to make it better than how it presently stands, right?

Enter RAM/RAD

Case Studies

Our solution allows achieving various goals, depending on your needs.

Some case studies:

One company wanted to keep the old software as is but also wanted their new hires to be able to use it fast and without complaining about the looks of shell terminal applications. So, in their case, they are living in a hybrid environment, where their ERP is both accessible via old means or through a web portal with all the cool "modern" features (mouse clicks, buttons, accessing different frames quickly by search box, etc), both attached to the same database.

A second company wanted to migrate entirely away from Ingres. Their ERP has several thousand simultaneous transactions per minute, many coming from outside applications and data connectors from Microsoft stacks. Their current database stack is SQL Server hosted on Azure after a

full conversion. They use the graphical tools built-in our solution to further develop the new codebase as well as managing its deployment (using dynamically generated Terraform templates).

A third company liked our web solution but also wanted to produce their own dedicated mobile apps, so they use our headless mode where a secure API provides those apps with all the useful metadata per frame (positioning, formatting, field actions, key options, etc) needed to shape the user interface within their React Native application. All user actions are then sent back to the API for processing and quick response.

How It Works

Our compiler automatically converts Ingres 4GL / ABF to modern technological stacks. The input for our conversion engine receives the 4GL source code, the ABF settings, and VIFRED form definitions, which are all converted into standard web technology to either run on browsers or into APIs to be consumed by mobile apps.

The entirety of business logic and data access is kept as it was with no discernible differences, allowing any legacy system to keep operating well into the future. We also provide services to adapt the conversion results into any of the serverless cloud architecture platforms out there.

You can configure direct access to the metadata database or, in alternative, you can use our extraction tool to copy all necessary data into one file and then upload it into our solution. Whatever approach is ideal for your requirements we have it covered.

But What Happens to the Source Code?

After it's compiled into our solution, you can choose between continuing any future development on top of the original codebase and tools, or you can use our integrated tools to develop your application further. When picking the former, you can recompile the specific frames that changed instead of the whole application. And when picking the latter option, you need not do anything.

What Does It Look Like?

Before:

Doc	Descricao	Numero	EAI	S	Encomenda	18-nov-2021 00:11:34 E:720					
SEL	SUGESTAO DE ENCOMENDA	1498503	N	N	0	Operator: ingres					
Cliente: [REDACTED]					RateioStk	Data Registro 18-nov-2021					
Armazem: [REDACTED] Seccao:12 Cat.Aprov:01					0	Data Producao 19-nov-2021/6					
						Qtd.Obj.Semana 377					
						%DiaSem: 17.23 %Tend:103.14					
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05444131	ATUM DESCONGELA	1.0	0.0	0.49	0.0	1	3.0	1	3.0	0.0	
02147562	BACALHAU FRESCO	0.0	0.0	0.30	0.0	1	3.0	1	3.0	0.0	
02147573	BESUGO KG	1.1	0.0	0.56	0.0	1	1.0	1	1.0	0.0	
02147673	CACHUCHO	2.7	0.0	1.35	0.0	1	1.0	2	2.0	0.0	
02147583	CANTARIL (DA CO	3.9	0.0	1.97	0.0	1	1.0	2	2.0	0.0	
02147742	CARAPAU MEDIO	0.3	0.0	0.30	0.0	1	5.0	1	5.0	0.0	
04049238	CARAPAU PELIM	0.0	0.0	0.30	0.0	1	6.0	1	6.0	0.0	
02147745	CARAPAU PEQ. 20	0.1	0.0	0.30	0.0	1	6.0	1	6.0	0.0	
02468374	CAVALA	0.0	0.0	0.80	0.0	1	6.0	1	6.0	0.0	
02147749	CHICHARRO 1/3	2.1	0.0	1.04	0.0	1	1.0	1	1.0	0.0	
02148078	CHOCO C/TINTA (5.5	0.0	2.79	0.0	1	1.0	3	3.0	0.0	

After:

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Cliente: Data Producao 19-Nov-2021 / 6
 Armazem: Seccao: 12 Cat.Aprov: 01 RateioStk 0 Qtd.Obj.Semana 377

%DiaSem: 17.23 %Tend: 103.14
 %corr2F: 0.00 %CL55: 100.00
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n.produtos: 53 erPrev 0.00 182.9 0.0 67.0 -2 1.8 67 123 0.0

Codigo	Desig. Produto	%Gana	%Prom	SugInic	AjStk	CX	Q/CX	NCxs	QtdEnc	Vendas
054441310000	ATUM DESCONGELADO LOMB	1.0	0.0	0.49	0.0	1	3.0	1	3.0	0.0
021475620000	BACALHAU FRESCO	0.0	0.0	0.30	0.0	1	3.0	1	3.0	0.0
021475730000	BESUGO KG	1.1	0.0	0.56	0.0	1	1.0	1	1.0	0.0
021476730000	CACHUCHO	2.7	0.0	1.35	0.0	1	1.0	2	2.0	0.0
021475830000	CANTARIL (DA COSTA)	3.9	0.0	1.97	0.0	1	1.0	2	2.0	0.0
021477420000	CARAPAU MEDIO	0.3	0.0	0.30	0.0	1	5.0	1	5.0	0.0
040492380000	CARAPAU PELIM	0.0	0.0	0.30	0.0	1	6.0	1	6.0	0.0
021477450000	CARAPAU PEQ. 20/30	0.1	0.0	0.30	0.0	1	6.0	1	6.0	0.0
024683740000	CAVALA	0.0	0.0	0.80	0.0	1	6.0	1	6.0	0.0
021477490000	CHICHARRO 1/3	2.1	0.0	1.04	0.0	1	1.0	1	1.0	0.0
021480780000	CHOCO C/TINTA (200-800	5.5	0.0	2.79	0.0	1	1.0	3	3.0	0.0

You will note that the frame's options are turned into clickable buttons at the top, which can also be invoked by their original shortcut key.

Being available on a modern tech stack which can add additional functionality allows, for instance, to have a searchable menu to quickly move into different frames in your application, as well as extracting any data into Excel files.

We also support all sorts of charts and dashboards that you can configure to your heart's content.

When Does Technology Become **Legacy**?

Old technology eventually becomes legacy due to any or all of the following points:

- **when it's considered an end-of-life product**
- **when it's out of support from the supplier**
- **when it's impossible to update to deal with newer security, legal, or compatibility concerns**
- **when it's no longer cost-effective to maintain**
- **when it's considered to be above the acceptable risk threshold**

When is it time to migrate your legacy **application**?

The right time to migrate from your legacy technology becomes a priority when:

- the cost of maintaining the old technological stack becomes greater than replacing it with new technology
- the technology prevents useful or required changes to services
- supplier support for the technology is no longer available or becoming increasingly more expensive
- the contract for the technology itself or its attached services is due to expire
- the risk of maintaining the old technological stack becomes too great

What Other Databases Are Supported?

Aside Ingres / Actian X, our solution works with PostgreSQL, Microsoft SQL Server, MySQL, MariaDB, and even SQLite.

We offer extraction/importing tools to move data from one RDBMS to another.

In addition, all old queries that likely have specific quirks that work only under Ingres SQL are automatically converted into the destination database's own SQL syntax when the application is being used. No changes are required.

Conclusion

Our solution solves not only the headaches of keeping your old legacy system alive, it empowers to the next level. Modern tech stacks offer unprecedented flexibility and agility, and it's time for your old codebase to take advantage of those features without the challenges from migrating entirely to other systems and starting all over.

RAM/RAD provides a new approach that enables old applications to stay current, focused on modern business priorities, using the most comprehensive translation solution for the entire Ingres stack and associated middleware.

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