



TRIENNIAL JOURNAL OF VERYANT AND isCOBOL

c-treeRTG[®] V3

A new addition with Veryant's 2021R1 release is c-tree RTG v3. Previous versions, for example 11.9 offered in 2020, were built on c-treeRTG major version 2.0. New features include the Web Browser-accessible monitoring tools, faster file access, more Cloud-ready improvements, and increased file security. [Here's](#) a full list of new features .

PANDEMIC NEWS

We've weathered the past year an a half well at Veryant, and hope you have too.

Our offices are open again. Stop by if you're in the areas of San Diego or Piacenza!



veryant

NEWS

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WHAT'S NEW

2021R1 is here

Veryant is pleased to announce the latest release of isCOBOL™ Evolve, isCOBOL Evolve 2021 Release 1.



We added remote project support to our IDE, improved IBM COBOL syntax compatibility, and added multiple enhancements to our GUI control set. The increasingly popular WebClient has a new look, and it's been separated from the EIS Suite into it's own product line.

The runtime is faster and more flexible, the application server administration is made more useful with logon times and message capabilities, and the debugger gives you additional information, such as displaying hexadecimal values and debugged source locations.

Web Services in EIS now handles PATCH and DELETE methods, and the ISMIGRATE and ISL utilities have been improved.

C-treeRTG's new major release version 3.0 is available with 2021R1, and includes a browser based set of administration tools and embedded replication agent.

All of this is installed using new installation files, with .msi, .dmg, and .sh setups for Windows, Mac, and Unix/Linux operating systems.

Read the details on our website [here](#).

We're all excited here at Veryant, and hope that you will be too!



QR CODES



Have you ever wondered how to put a QR code on your screen or in a print layout?

By invoking the ZXing (Zebra Crossing) barcode library you can generate an image file that represents the QR code, then load this image file with the W\$BITMAP routine and use it either on video or in print jobs.

We've made it easy for you. The details are discussed in [this KB article](#).

c-treeRTG vs. ISAM files

c-treeRTG is a combination of a full COBOL file system and a powerful, dynamic database server that maps all COBOL files into data tables, including support for REDEFINES and multiple keys. c-treeRTG has many advantages over ISAM data files, including:

- Significant performance improvement over Jisam and other ISAM data formats.
- A full transaction engine that includes transaction processing, data recovery, encryption, backup, and real-time replication.
- SQL access to your data, giving you real-time read/write access your data, and allowing BI tools and modules in modern languages to access your COBOL data files
- Multiple features to fight data corruption, including ACID on-line transaction processing with point-in-time recovery, two phase commits, several replication options, multiple save/restore points, and easy rollback.

Converting your data files to ctreeRTG is easy with isCOBOL's ISMIGRATE tool.

- Enhanced memory management features, including pure memory-resident data and index files and shared memory communication protocol (as well as TCP/IP)
- User management tools like the new browser-based Web utilities dashboard for access to your data from anywhere and the ability to send messages between server and clients, including a notification mechanism to send messages based on file changes in real time.
- Enhanced security features, such as user- and group-based file access control as well as the ability to encrypt files with advanced encryption algorithms.
- ctreeRTG is available for most COBOL vendors, so you can access the same data from isCOBOL and other COBOL flavors (Micro Focus Cobol, Acucobol, RM/COBOL, etc.) to help you during a transition time.

c-treeRTG is provided in two levels:

- c-treeRTG Evolve is included in your isCOBOL Runtime without additional charge
- c-treeRTG Enterprise adds features and is available as an add-on license.

See what each level covers on our website

HERE



NEW YOUTUBE VIDEOS:

[isCOBOL SDK installation on Unix/Linux](#)

[2021R1WebClient](#)

[Code Analysis Report](#)

[Do you want to convert your batch COBOL code to Java?](#)

[Access ISAM files with UDBC and File Server](#)

HAVE YOU SEEN THIS?

NEW KNOWLEDGEBASE ARTICLES:

[How can I generate QR codes from COBOL?](#)

[Consuming a webservice returns error 500 because of the lack of a Header property](#)

[How do you handle printing from the WebClient?](#)

[How can I use the Call/Cancel custom HOOK program to get the start and end time of every CALLED program?](#)

[How can I tell if my application is running in the WebClient environment or another environment?](#)

Subscription pricing has benefits for everyone!



Fabio Scalzotto is Veryant's Head of Marketing, and has been with Veryant since it's beginning in 2007

The world market for subscription e-commerce has grown by more than 120% per year for the past four years. The increasing diversity is another interesting aspect in this market: over the past four years the subscription boom has spread to all types of goods and services, software included. More than 45% of Fortune 500 Companies have included this pricing model in their pricelist.

Veryant has been offering a subscription pricing model for many years, and we've found that there are multiple benefits for our customers, both end users and ISVs. We believe our ISV customers would benefit from a similar offering on their own pricing models.

What is subscription pricing?

In the subscription-based business model, customers pay for a service or product on a regular basis (typically monthly or yearly).

In the software world the subscription-based business model offers the customer everything they need and often represents the least expensive choice. In other words, the subscription model in the software world is similar to the "All inclusive" model for resorts, or to the "All you can eat" model for restaurants. This "flat agreement" allows the customer to pay a fixed, pre-defined, annual price with no additional costs for more licenses, upgrades or support.

Why has the subscription model become so popular?

The answer is clear and simple: Subscription pricing presents advantages for the company and for its customers too.

As a matter of fact, this model helps the company capitalize on the compounding value of customer relationships; as long as the customers continually see the value the company provides for them, they'll continue to pay for it.

What are the advantages for the Customer?

Customers are usually very careful about how they spend money, and the subscription model offers customers cost savings, as well as a fixed expense and stable product. They can:

- estimate expenses and budget accordingly with the fixed, recurring price, improving their business risk management
- get immediate access to the whole product with a small initial investment, and
- enjoy the increased benefits provided by improvements to the company's products.

What are the advantages for the Company?

Subscription business creates a continuous contact with the customer base, making it simple to market additional complementary services. Upsells are usually straightforward because the customer has a prior relationship with the company and will be receptive to any added value the company can provide.

Additionally, once subscription fees have become a part of consumers' expected budget, it becomes easier for them to see additional features as more affordable.

What about Veryant?

Veryant's goal is to stay up to date with the market. We already have a kind of license that fits the subscription price model: our Annual License is exactly the license suitable for the subscription model.

In some countries the subscription pricing model is already used by our customers with great success, while in other countries there is a bit of hesitancy. But Veryant has seen the strength of the subscription price model.

CONCLUSION

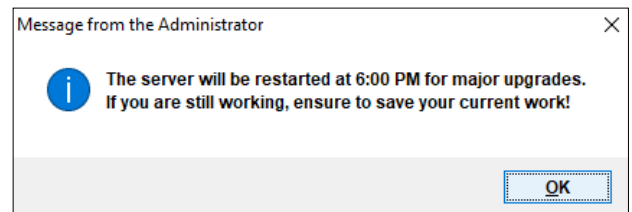
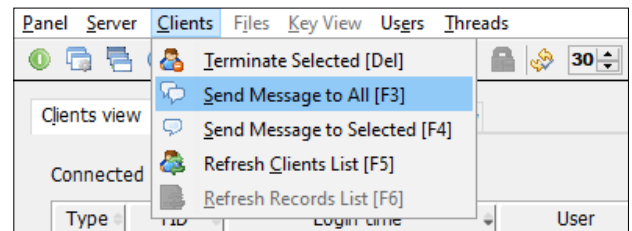
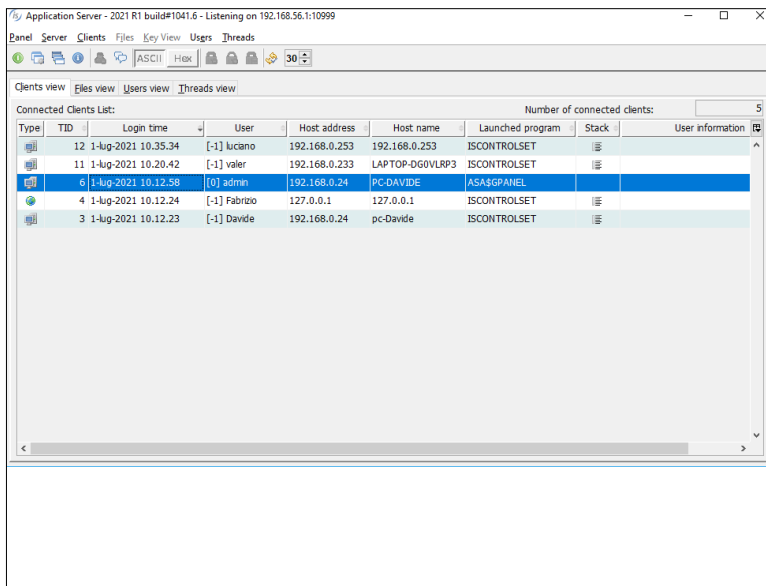
The subscription pricing model is an increasingly popular business model. This type of pricing allows the company to offer affordable, high-quality products that improve with time, thanks to the emphasis on longer customer relationships and recurring revenue. Subscription pricing presents advantages to both company and customer so that everybody wins.

2021R1 isCOBOL Server Administrative Panel

With the addition of new features of A\$* routines to save logon times and send messages, we've improved the Application Server's administrative panel, giving you more information and adding the ability to send messages to the clients from the Panel.

Here's a screenshot of the new panel with clients of different types, including the file server and remote calls. Notice the new logon time in the third column.

To send a message to all, or just some of the clients, click on "Clients", then "Send Message...". As you can see, this is a great way to let everyone know when they need to be out of the system, for example.



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USING REGULAR EXPRESSIONS

One way to modernize your GUI screens is to remove outdated properties. For example, the 3D style was popular in the past but now makes a screen look dated. You can remove this property throughout your programs without any code change. Just tell the compiler to remove any mention of 3-D during compilation.

You do this with a regular expression entry in your compile properties file. Here's an example of the regular expression to remove the 3D style

```
iscobol.compiler.regex="( ?i)( 3-D,)" "" \  
"( ?i)( 3-D)" ""
```

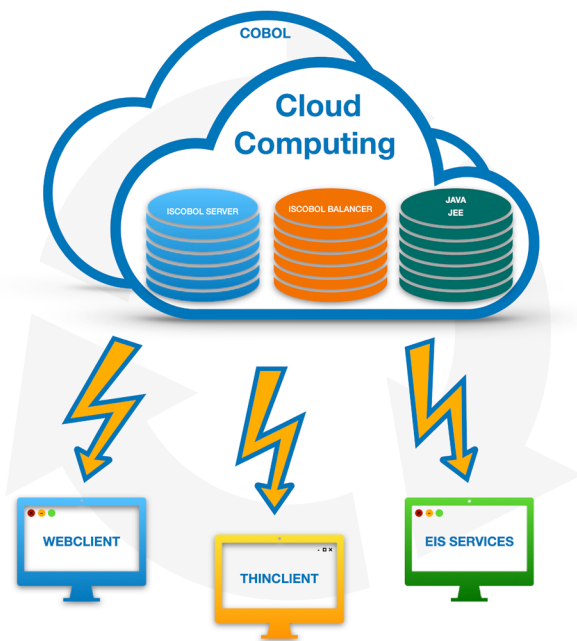
For more details, try the modernization sample (sample\modernization\graphical\code-injection), or read the KB article [here](#).

You can also see a demonstration of a screen before and after in our video [here](#).

Cloud Computing Options

Cloud computing is becoming increasingly popular, and with good reason. Using a network of remote servers hosted on the internet instead of a local server gives you numerous benefits. Here are just a few:

- Scalability and elasticity, giving you the ability to scale up when your usage need increases or down if resources are not being used
- No hardware on-premises means maintenance and application software upgrades are easier, increasing productivity and making the best use of your IT resources.
- Access wherever and whenever you need it. Among other benefits, this can empower collaboration among remote teams and locations.
- Performance is monitored by IT experts from the service provider, and consistent and loosely coupled architectures are constructed using web services as the system interface



Veryant can help you with several products that can easily be used in the Cloud:

- isCOBOL EIS – Web services: COBOL applications that use REST or SOAP web services typically have an html-based user interface to be executed on any browser. The COBOL code is on the server side to satisfy the web server requests. In this scenario you need a JEE container (for example Tomcat) on the Cloud server machine. This container can deploy any web application using a standard .war file that contains all the necessary Java components, including isCOBOL libraries and COBOL compiled .class files.

Web services is the most common and modern solution, however Veryant supports legacy solutions like CGI and WebDirect as well. These are implemented the same way as Web Services.

The isCOBOL EIS product is licensed as an add on to the development system, and doesn't require a special runtime license.

- IsCOBOL WebClient solution: In this scenario the COBOL application also manages the user interface – either character-based or graphical-based. On the Cloud server you would either run the WebClient process (based on Jetty) or deploy the WebClient .war file in an existing JEE container.

Additionally, the isCOBOL Server can be started on the same server machine or on a different server. In the case of different servers we suggest they be from the same Cloud provider for faster tcp communication.

The WebClient can be purchased as an add-on to the runtime licenses. The EIS license isn't needed and there is no additional charge for the isCOBOL Server.

- IsCOBOL ThinClient solution: If your application already runs in a pure ThinClient environment, these same client PCs can communicate with isCOBOL Server running in the Cloud. In this case the performance is less optimized, but it could be an acceptable solution too.

Only the runtime license is necessary on the Cloud machine.

- RDP/VNC/Putty solution: Even when your COBOL applications run locally on a server machine, that server machine could be a Cloud server. Users would connect to using remote desktop or remote terminal applications.

Veryant is focused on helping you keep your COBOL up-to-date with these Cloud options. Our variety of options make cloud computing available for everyone no matter what stage their COBOL application is in on the modernization spectrum.

Consistently defining data items with similar type and structure

To define single or group data items consistently, you can use either the SAME AS or the TYPEDEF clauses.

The [TYPEDEF clause](#) creates a programmer-defined usage structure that can be copied with the USAGE verb. Here's an example of a date description that is defined with the TYPEDEF syntax, and then three more dates defined below it that use the same definition by referencing the first with a USAGE verb:

```
01 td-date      typedef.
05 dt-yy       pic 9(4).
05 filler      pic x value "-".
05 dt-mm       pic 9(2).
05 filler      pic x value "-".
05 dt-dd       pic 9(2).

01 contract-date      usage td-date.
01 end-of-contract-date      usage td-date.
01 birth-date         usage td-date.
```

The [SAME AS clause](#) is similar. Items using the "SAME AS" syntax inherit the definition of another item. So here is the another date definition, with two additional dates defined below it with the same definition.

```
01 contract-date.
05 dt-yy       pic 9(4).
05 filler      pic x value "-".
05 dt-mm       pic 9(2).
05 filler      pic x value "-".
05 dt-dd       pic 9(2).

01 end-of-contract-date      same as contract-date.
01 birth-date               same as contract-date.
```

In both cases, if you want to assign values to the birth-date children items you would do the following:

```
move 1990 to dt-yy of birth-date
move 10  to dt-mm of birth-date
move 17  to dt-dd of birth-date
```



NEW 2021R1 WEBCLIENT

- Java 11 support
- Mobile Device W3C certified accessibility
- Supports High pixels-per-inch displays
- Administration dashboard redesigned and separated from applications
- Cloud-ready
- Multi-language
- Runs on multiple web servers (Jetty, Tomcat, etc.)

Try it with an evaluation license from your account manager.



Welcome to **Justin Cannell**,
Veryant's new Business
Development Manager,
North America

Two uses of the "&" to Concatenate Strings and Figurative Constants for Better Code Readability

Scenario 1: Typing a long line in ANSI mode without the "-" in column 7.

```
move "This is the content of my string. This string is too lo
-   "ng for the ANSI format" to my-var.
```

Can be written as:

```
move "This is the content of my string. This string is too "
    & "long for the ANSI format" to my-var.
```

Scenario 2: Replacing the STRING statement.

```
string "ab"          delimited by size
low-value            delimited by size
"cd"                delimited by size
into var
```

can be written as:

```
move "ab" & low-value & "cd" to var
```



Evolution, without revolution



Contact Us

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If you would like Veryant to contact you for special quote or sales assistants email us at sales@veryant.com

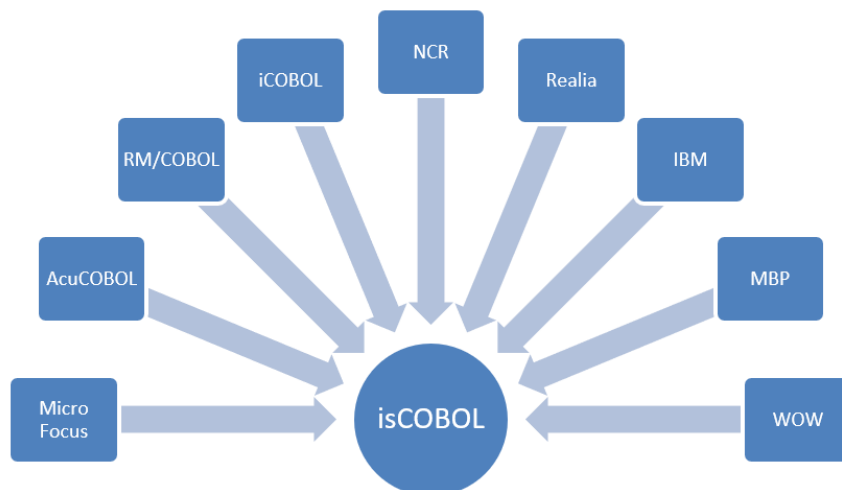
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As always, 2021R1 contains multiple compatibility additions – as we continue to make your conversion process as smooth, quick, and pain-free as possible.



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