

Developing AGILITY

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Contents

Information as a Differentiator

With AB Suite, you can connect, integrate, and exchange data in ways that help you drive sustained differentiation in an increasingly competitive environment.

Notes from the AB Suite 7.0 Beta Test

Participants in the AB Suite 7.0 Beta 1 test were treated to several new capabilities that will eventually form the foundation of the newest AB Suite release.

Engineering Corner: Using Batch Scripts, TFS, and DPM

Combine batch scripts, Team Foundation Server, and the Deployment Package Manager (DPM) tool, and you'll find it easier than ever to take advantage of the DevOps capabilities packed into AB Suite.

Insurer Takes Development to the Next Level with TFS Implementation

We recently worked with a long-time AB Suite client to bring the power of TFS source control to their environment.

UNITED Once Again

Just like every UNITE conference, UNITE 2017 gave attendees an opportunity to network with their peers, discuss the factors shaping the IT world, and learn how AB Suite is being readied for the future.

Info Center

We provide a wide array of materials to help you stay up to date on everything that's happening in the world of EAE and AB Suite.



Information as a Differentiator

By Thangathen Ponnusamy, Global Product Manager – Enterprise Application Environment and Agile Business Suite, Unisys



In the age of the digital business, information is the true differentiator.

With both market and client expectations accelerating at a remarkable pace, the need to generate greater business value from existing information assets – and connect it across distributed data sources in diverse ways – has never been higher. But it's not

enough to simply connect this data. To truly excel, organizations must be able to make it available at any place, at any time.

With Agile Business Suite (AB Suite®), you have access to a number of tools that can help you extract, exchange, and integrate your business-critical data – so it can help you drive lasting differentiation in today's digital age.

AB Suite WebAppSupport and Business Integrator

Web Services empower you to collaborate within your organization, as well as with external business partners, by integrating applications – regardless of how they're implemented, the platforms they're running on, and the language in which they're written. AB Suite applications built for the ClearPath® MCP operating environment have the ability to seamlessly take advantage of the MCP WebAppSupport libraries. With the AB Suite WebAppSupport Web Service Import Wizard, you can create an AB Suite class that encapsulates the Web Service functionality and handles outbound calls to Web Services.

AB Suite Business Integrator software offers another means of combining and exchanging data. With a set of powerful tools that enable your applications to interface and interact with external systems and services, Business Integrator makes it possible to quickly and seamlessly integrate your AB Suite applications with Web Services or a variety of third-party applications. >>

Data Exchange

With [Unisys Data Exchange](#), you'll enable selective and near-real-time data replication and transformation from a source data store to one or more target data stores.

It can propagate a selected set of data across stores, and while doing so, apply transformations that help you support business process integration, reporting, big data analytics, and business intelligence activities.

With Data Exchange, you're free to integrate your AB Suite application data with other Web or enterprise application data. It works with the existing AB Suite applications and databases deployed on your ClearPath Forward system, minimizing the cost of changing source code and database schemas.

And, supporting business intelligence and big data efforts is as easy as propagating a set of data from your AB Suite application data store to whichever system you use to manage these activities.

In addition, Data Exchange supports transformations from the following source databases to their respective target databases:

- Enterprise Database Server for ClearPath MCP to Microsoft® SQL Server®
- SQL Server to Enterprise Database Server for ClearPath MCP
- Enterprise Database Server for ClearPath MCP to Oracle Database

ClearPath Forward ePortal

The [ClearPath Forward ePortal](#) provides a secure, enterprise-class means of extending AB Suite for MCP applications to Web Services, mobile devices, and web browsers. With an optimized, application-specific architecture that automates much of the modernization process – from development through deployment – you'll spend less time managing projects and more time reaping their rewards.

You'll be able to apply the latest integration methods to your AB Suite applications using ePortal. With ePortal, you can connect your existing AB Suite application with the built-in capabilities included in today's most popular smartphone operating systems. For example, creating these integrated, hybrid apps means you'll enable AB Suite data and external information sources to freely interact, allowing you to do things like pull data from the native navigation app into your AB Suite application or enable it to access the phone's barcode scanner.

In addition, ePortal uses Web API technology to expose AB Suite transactions as the simple, lightweight, scalable RESTful services that have become a preference among many developers. These services use the Java Script Object Notation (JSON), a text-based open standard that's becoming more prevalent in the industry because it's much easier to work with than SOAP and XML.

Your Data is Your Difference

In today's environment, Information is what differentiates your business. And with [AB Suite](#), you'll have many options for integrating and exchanging data in unique, innovative ways. If you'd like to learn more about the capabilities described in this article, or would like explore them further in a pilot project, we encourage you to contact us at ABSuite@unisys.com.



Notes from the AB Suite 7.0 Beta Test

As we ready Agile Business Suite Release 7.0* for its planned 2Q 2019 availability, we had the opportunity to engage several AB Suite users in the first of many planned beta tests. Below are summaries of some of the key capabilities and features covered in the AB Suite 7.0 Beta 1 test.

Visual Studio 2017

The development environment for AB Suite 7.0 is integrated with Microsoft Visual Studio® 2017. Visual Studio 2017 starts faster, is more responsive, and uses less memory. In addition, it includes numerous productivity improvements. For instance, the new Go To feature showed beta testers a quick, new way to find AB Suite version files, types, methods, and other symbols in their code.

Basic Mode

A new Product Features mode, Basic Mode is meant to be a simpler mode of operation when defining an AB Suite model. We intend for it to remain feature-neutral – with no new features in new releases – into the future. If you want to take advantage of advanced functionality and new features, you can easily convert a Basic Mode model into one of the other Product Feature modes – Classic, XML Framework, and Client Framework.

In the Beta 1 test, the differences between Basic Mode and the other Product Feature modes were fairly subtle, as most of the work so far addressed the internal product infrastructure.

To that end, the Basic Mode included in this beta release offered:

- A new “Primitive” type that is used for all re-usable primitive type definitions – such as dictionary items – and helps to make a clear distinction between class definitions of primitives and non-primitives. Primitive classes are no longer used for re-usable primitive definitions.
- Instantiation that’s no longer defined by the “Inherits” property. Instead, all attributes are created as “Template-based” – they use the “Template” property to derive from a class or type.
- Value-checking logic that’s been simplified and made available on Ispec attributes only.
- A version of the “IsInnerClass” property that’s hidden and internal. Additionally, behavior of the “inner” class is now determined automatically by the model.
- Models that can be built to, and run on, the following platforms:
 - MCP
 - CLR
 - Debugger

Beta 1 testers had two ways to create a Basic Mode model. They could use the New Project wizard to create a new model then choose the “Basic Mode” option. Or, they could import an Enterprise Application Environment (EAE) model file and select the “Migrate to Basic Mode” checkbox on the Import dialog. Note that this second option is temporary in the Beta 1 version. The ultimate plan with AB Suite 7.0 is for all EAE model file migrations to automatically create a Basic Mode model. >>

The ability to import most simple EAE model files – such as “SAMPLE.mdl” – was available in the Beta 1 test, though the ability to import larger, more complicated customer models has not yet been tested.

More changes to Basic Mode are planned, so it more closely aligns its functionality with the equivalent capabilities of EAE that make the upgrade to AB Suite more straightforward.

AB Suite on ClearPath MCP

The primary focus of AB Suite Release 7.0 on ClearPath MCP is improved data security and integrity. To that end, the Beta 1 test included the following DMSII features:

- **Sensitive Data:** When set to “TRUE,” the Segment Dasdl Sensitive Data property enables the SENSITIVEDATA file attribute for such database files as the control file, audit files, and dump files.
- **Log Access DMVerbs:** Qualification of LOG ACCESS is enabled by allowing the entry of one or more DMVERBS as part of the LOG ACCESS DMVERBS Class Dasdl property.

- **Audit Encrypt:** The ability to select User Defined CopyAudit text provides complete control of the Audit Trail specification via free-format user entry.
- **ETA Support:** Support for both full Epsilon and full ETA architecture runtimes is now available.
- **MCP RATL SSL:** AB Suite 7.0 on ClearPath MCP supports SSL message packet encryption between Component Enabler and MCP Ratl, allowing the following Component Enabler clients to make use of the RATLSSL Protocol with an MCP Host:
 - Presentation Client, either standalone or browser-based
 - ASP.NET
 - VB.NET
 - WS.NET
 - JSP

A great big “Thank You!” to everyone who participated in the AB Suite 7.0 Beta 1 test. If you’d like to take part in upcoming Release 7.0 beta tests, please reach out to us at ABSuite@unisys.com.

*Statements about future product releases are based on current plans that are subject to change and non-binding.



Engineering Corner: Using Batch Scripts, TFS, and DPM

Agile Business Suite Release 6.1 includes built-in support for basic DevOps capabilities using Team Foundation Build (TF Build) for the Windows Runtime.

And, steps to automate system deployments are detailed in the [AB Suite product support documentation](#). Under the “HowTo/Team Foundation Server” section, you’ll find a link to a zip file containing an overview of the feature and general steps. It also includes a useful demonstration project that uses PowerShell scripts to run the deployment operation on the Sample system.

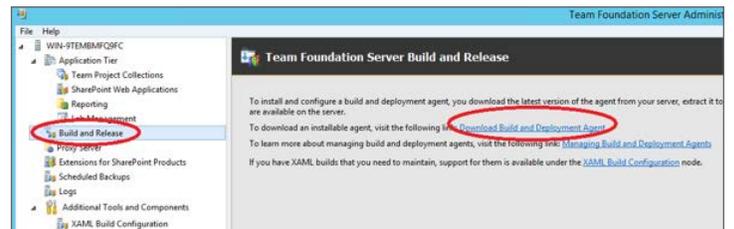
The demonstration, while fairly straightforward, was carefully chosen to illustrate how a number of unique AB Suite capabilities can work together with TF Build to provide a more streamlined DevOps experience.

The main engine for AB Suite DevOps lies in the TF Build process, which orchestrates the steps of the deployment operation. Of course, TF Build is tightly integrated with Microsoft Team Foundation Server (TFS) itself, so it’s directly aligned with all recommended AB Suite development lifecycle management processes.

In earlier AB Suite releases, we introduced the use of msbuild – the standard Microsoft build engine – to build pre-defined AB Suite .smproj projects. The idea is, you set the project once – including importing and configuration – and msbuild.exe can be used by TF Build in the AB Suite application. There are some setup steps that you need to be aware of first, however.

Setting Up TF Build

Before you can get TF Build to build your .smproj project, it’s important to set up your Visual Studio environment for the TFS agent. First, look in the TFS Admin Console and download the VSO agent.



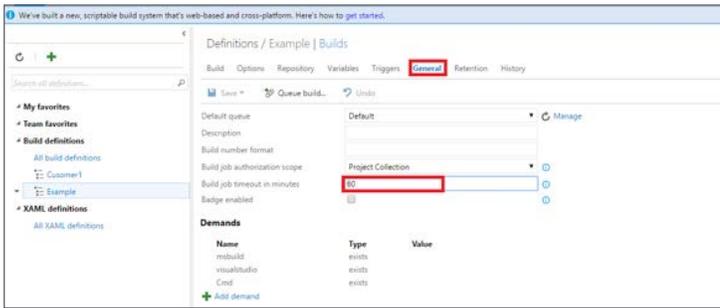
Then, run the included ConfigureAgent.cmd to install a “VSO Agent” service.

Name	Description	Status	Startup Type	Log On As
Telephony	Provides Telephony API (TAPI) support for programs th...	Running	Manual	Network Service
Themes	Provides user experience theme management.	Running	Automatic	Local System
Thread Ordering Service	Provides ordered execution for a group of threads with...	Running	Manual	Local Service
USDP Device Host	Allows USDP devices to be hosted on this computer. If...	Running	Disabled	Local Service
User Access Logging Service	This service logs unique client access requests, so the f...	Running	Automatic (D...	Local System
User Profile Service	This service is responsible for loading and unloading us...	Running	Automatic	Local System
Virtual Disk	Provides management services for disks, volumes, file s...	Running	Manual	Local System
VirtualBox Guest Additions Service	Manages VM runtime information, time synchronization...	Running	Automatic	Local System
Visual Studio Standard Collector Service	Visual Studio Data Collection Service. When running, th...	Running	Manual	Local System
Visual Studio Team Foundation Background Job Agent	The Team Foundation Background Job Agent runs sch...	Running	Automatic	Administrator
Volume Shadow Copy	Manages and implements Volume Shadow Copies usk...	Running	Manual	Local System
W3C Logging Service	Provides W3C logging for Internet Information Services...	Running	Manual	Local System
Web Management Service	The Web Management Service enables remote and dbl...	Running	Manual	Local Service

During installation, you get to specify a service account – ours is simply “Administrator” above, though we do recommend a dedicated administrative account instead of the default “Administrator.” Whichever account you choose, **you’ll need to start Visual Studio at least once using that account** in order to establish the necessary user profile and paths.

Since the TF Build agent will run under this service account, it’s important to make sure your default Build Output Directories are set to the desired location. >>

The job you set up in TF Build also has a default timeout of 60 minutes, so you'll need to adjust it based on the expected time your AB Suite application build normally takes.



In most cases, creating the AB Suite application package – the MSI file – will only require you to use an msbuild step in the Build Agent. It's also possible to use msbuild to perform end-to-end deployments, but the packaged example assumes additional deployment steps.

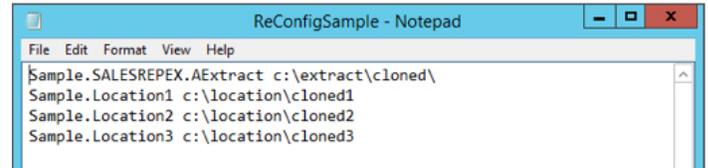
And it's during these additional deployment steps that the DevOps integration capabilities in AB Suite really come into their own. To illustrate, the example looks at two post-build steps: the use of the Deployment Package Manager (DPM) tool and the deployment of the built MSI file itself.

Driving DPM

One of the unique features of the AB Suite Runtime for Windows is the ability to modify the application MSI file post-generation using DPM. Part of the AB Suite Runtime for Windows, DPM recompiles a small part of the application without touching the binaries that contain the application logic itself. Though it offers both GUI and command-line interfaces, we use the command-line version – DPM-Console.exe – in TF Build. The command line in the example is as follows:

```
C:\DeploymentPackageManager\DPM-Console.exe -N -B="C:\intermediate\SampleDeploy.msi" -ConfigurationData C:\TFSDEVOPS\Reconfiguration\ReConfigSample.txt -SchemaName=Sample1Clone -SystemName=Sample1Clone -OutputPath=C:\TFSDEVOPS\ClonedPackages -DatabaseName=testClone -ServerReg=db -PackageName=Sample1NewClone -PkgInstDir="c:\installClone" -o
```

The “DPM-Console” executable creates a new MSI using the supplied SAMPLEDeploy.msi as input. Deployment properties, such as a unique SystemName, PackageName, and installation directory, are also supplied. And, notably, we can also change the Location properties originally specified in the application model. The ReConfigSample.txt would like this:



As a result, DPM allows you to change most of your application's built-in settings, giving you the freedom to deploy a second instance – without it clashing with existing copies – or match it with a variety of different environments with no regeneration required.

Managing Deployment

Application deployment relies on the solution's Runtime Transfer capabilities, which allow application MSI files to be deployed locally without using Developer. The feature is also available as a command line – DeployPackage.exe – and as part of a small number of administration utilities included in the AB Suite Runtime for Windows. These utilities provide a command-line interface to the more commonly used operations in the AdminTool GUI. They're also available as a programmatic API using the following assembly:

```
Unisys.AgileBusiness.RuntimeAPI.dll.
```

Our TF Build example uses the DeployPackage.exe:

```
C:\Program Files\Unisys\AB Suite 6.1\Bin64\DeployPackage.exe" /L C:\TFSDEVOPS\ClonedPackages\Sample1NewClone.msi /U MyAppUser /P SecretPassword2017*
```

This deploys the modified MSI package we created using DPM, including the supplied application user credentials. >>

Adding the Batch File to the Build Definition

To start, package up both command lines in a batch file, like the following example:



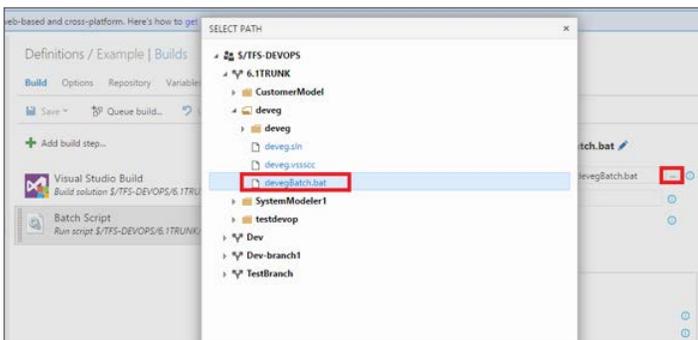
```
DevegBatch.bat - Notepad
File Edit Format View Help
ECHO "Modifying Package"

C:\DeploymentPackageManager\DPM-Console.exe -H -B"C:\intermediate\SampleDeploy.msi" -ConfigurationData C:
\TFSDEVOPS\Reconfiguration\ReConfigSample.txt -SchemaName=Sample1Clone -SystemName=Sample1Clone -OutputPath=C:
\TFSDEVOPS\ClonedPackages -DatabaseName=testClone -ServerReg-db -PackageName=Sample1NewClone -PkgInstDir="c:
\InstallClone" -o

ECHO "Deploying System"

C:\Program Files\Unisys\AB Suite 6.1\Bin64\DeployPackage.exe" /L C:\TFSDEVOPS\ClonedPackages\Sample1NewClone.msi /U
MyAppUser /P SecretPassword2017"
```

Then, add it to the build definition:



This way, TF Build will be able to perform both steps after the MSI is created.

Other Possibilities

Another thing you could do is automate the initial run of Visual Studio mentioned above by creating a batch file similar to the example below, then adding it to TF Build.

```
echo off
runas /user:MyAdministrativeBuildUser
"%VS140COMNTOOLS%..\IDE\devenv.exe"
```

TFS can automate many more administrative steps, such as copying files, checking prerequisites, and building external projects.

We'd love to hear what you're doing with the DevOps capabilities in AB Suite. If you'd like to share some of your recent projects, please email us at ABSuite@unisys.com.



Insurer Takes Development to the Next Level with TFS Implementation

This is what it looks like when an insurance company is viewed as a leader in its space: A combined portfolio of property, casualty, and life insurance spanning more than 40 states. And representation from well over 2,000 independent agents.

Unisys has helped the organization maintain and expand this reach for well over three decades. It's a partnership that has seen both companies work together to create innovative solutions designed to meet the evolving needs of the organization and its agencies and customers.

But, given the competitive nature of the insurance market, the company must always be on the lookout for new ways to differentiate itself and respond faster and more effectively to emerging agent and consumer demands. The trouble is, the traditional waterfall development approach it followed for years was quickly proving too inefficient and time consuming for today's environment.

It became even less sustainable when the organization adopted a new initiative to run projects concurrently in order to increase the speed with which it brings new capabilities to market. Given the pressures brought upon by external market forces and internal strategies, the time had clearly come for a new approach.

To get there, the insurer turned to Unisys to help it bring the source-control capabilities available in Microsoft Team Foundation Server (TFS) into its Agile Business Suite environment.

A Fully Guided Implementation

The process began with a formal, four-day AB Suite Version Control Workshop. During the workshop, Unisys

consultants worked with the company's IT team to make sure they were well acquainted with all of the source-control functions TFS offers for the AB Suite environment.

Then came the time to implement TFS. Unisys guided the process every step of the way, focusing the early stages of the project on defining and refining the insurer's new TFS-aided development process. An experienced Unisys subject-matter expert stayed onsite throughout the implementation, supporting every phase of the project and helping to make sure the business-critical AB Suite applications stayed up, running, and available as they put TFS in place.

The implementation project lasted nine weeks.

Development, Accelerated

Working closely with Unisys consultants throughout the TFS implementation gave the insurer's team access to the experience and expertise – not to mention confidence – they needed to complete the project in a successful, timely manner.

With TFS in place, the company has seen a marked increase in the efficiency and agility with which it develops applications. Accelerating development in this manner also made it easier to comply with the internal initiative to run concurrent development projects. Not only has the organization's IT team met this directive, they've also been able to get new capabilities to market faster.

And by relying on the combination of AB Suite and TFS to accelerate its development and release timelines, the insurer has found a vital new means of sustaining – and extending – the differentiation that has for years set the company apart from its competitors.



UNITEd Once Again

UNITE 2017, the annual conference for the International Unisys User Association, took place from October 30th through November 1st in Atlanta, Georgia.

Members of the UNITE organization joined together with the Unisys user community to share their experiences, meet friends new and old alike, and learn about all of the things Unisys is doing to keep pace with the rapidly changing business and technology worlds.

There was a good slate of Agile Business Suite and EAE content once again this year.

The **“AB Suite Release 6.1 Technical Update”** session offered an overview of some key new capabilities and enhancements packed into the latest AB Suite release: DevOps support, new DMSII and MCP interoperability features, improvements to the development experience, and new XML and Client Framework capabilities.

During **“More than just Cool Web Pages or an App,”** attendees learned how the old adage that “no man is an island” applies to their EAE and AB Suite applications. To that end, the session explored the inputs and outputs that make these applications tick, as well as some of the strange and wonderful ways internal users, external customers, and business partners have been interacting with clients’ systems for years.

The DevOps craze took center stage during **“DevOps – Bringing Developers, Operations, and Even Users Closer Together.”** Attendees received an overview of the change-management and DevOps features available in EAE and AB Suite, then took part in an open discussion about how they currently manage and coordinate the development and release of complex application updates.

And as is tradition for a UNITE conference, we concluded with **“EAE and AB Suite Birds of a Feather,”** an open discussion that allowed users to share how they’re leveraging EAE and AB Suite to address specific operational and technical challenges at their sites.

It was another great year at UNITE. We thank the UNITE members who helped organize and run the event, the session presenters, and everyone who attended the conference.



Info Center

New additions to our libraries of How To documents, white papers, and other useful information include:

- **Utility:** TrackerStats – Utility to capture statistics about the running AB Suite Windows Runtime systems (**Updated**)
- **Software Qualification and Support Matrix:** AB Suite 5.0 (**Updated**)
- **Software Qualification and Support Matrix:** AB Suite 6.1 (**Updated**)

To view these and other resources, simply go to public.support.unisys.com and choose “Documentation” in the “Public Information” box located on the left-hand side of the screen. No special login is needed.

In addition, there are several pieces of thought leadership available on the [AB Suite homepage](#):

- [Unisys Agile Business Suite: Capitalize on Change, Don't React to It](#)
- [AB Suite in the Application Lifecycle](#)
- [Agile Development with Agile Business Suite](#)

We also encourage you to view the list of available [AB Suite training courses](#). A blend of instructor-led and computer-based trainings, these great educational resources include graphics, interactivities, simulations, and demonstrations with voice-over narration.

Please be sure to visit the [ClearPath Forward Client Education homepage](#) to view the AB Suite Course Catalog and other helpful education and training resources.

To stay up to date on the latest happenings in the ClearPath Forward™ world, please [subscribe](#) to the ClearPath Forward Connection™ newsletter.

And to learn about everything the ClearPath Forward Services portfolio has to offer, please check out our [brochure](#), [eBook](#), and [high-level video](#).

If you're looking to explore AB Suite on an evaluation basis, please [download AB Suite Express today!](#) This free download includes the full AB Suite package – AB Suite Developer and AB Suite for Windows Runtime – as well as a “getting started” course designed to help you begin exploring everything AB Suite has to offer in no time.

[Want to help shape AB Suite Release 7.0? The beta tests are ongoing. If you'd like to participate, please let us know at \[ABSuite@unisys.com\]\(mailto:ABSuite@unisys.com\).](#)