



AB Suite Strategy, Roadmap and Update

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Agenda

- Strategic themes for AB Suite
 - ✓ Cloud Theme
 - ✓ DevOps
 - ✓ Security
 - ✓ Microservices
- Roadmap

The New “Business as Usual” for today’s leaders

44%

of maturing companies actually preparing for Digital Disruption – yet 90% acknowledge it's about to affect them ¹

50%

of the workforce will be Millennials by 2020²
(Gen Z is here)

38%

of the jobs that people will go into in the next 12 years have not yet been invented³

1. WTW- The Future of Work
2. PWC – Millennial at work, Reshaping the Workplace
3. PNC – Digital Disruption Challenges

Strategic Themes for AB Suite

Cloud Computing

Building, implementing and maturing cloud strategies will continue to be a top priority for years to come

DevOps

Delivering software quickly and reliably is at the heart of technology transformation

Security

Prevention of Cyberattacks and Data Fraud Are Top Priorities for CIOs

Microservices

Microservices based applications are becoming the norm.

Why Clients Love AB Suite

High Level Language

- Less code to write, test and maintain
- Higher Productivity

Automatic Generation

- 100% automatic generation of solutions for ClearPath MCP and Windows

Easy to Learn, Easy to Use

- Based on Visual Studio
- High-level scripting language easier than C# and Java

Addresses Demographic Renewal and Skills Issues

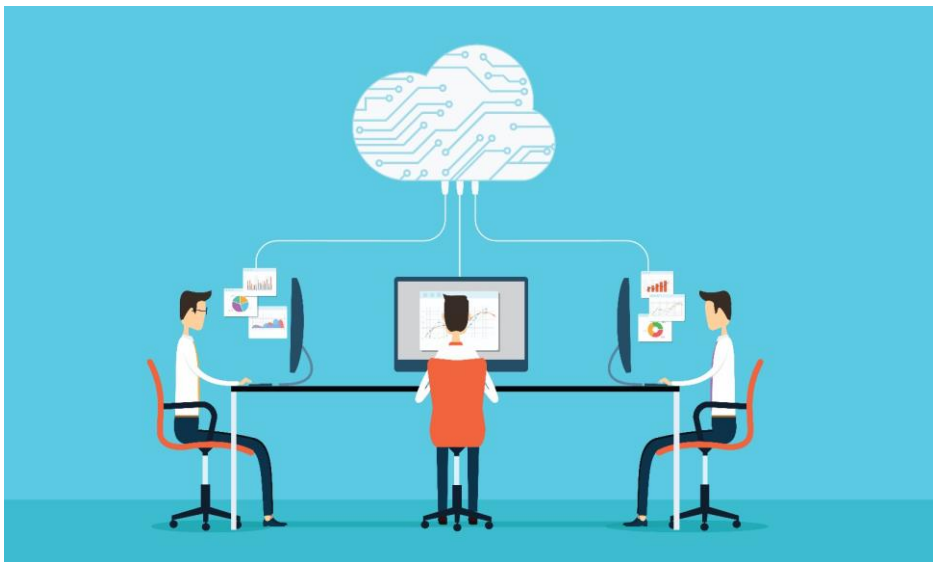
- Technology step towards industry-popular products
- AB Suite development environment employs widely used development components... DevOps, UML, Microservices, XML

AB Suite brings all benefits of EAE plus many more



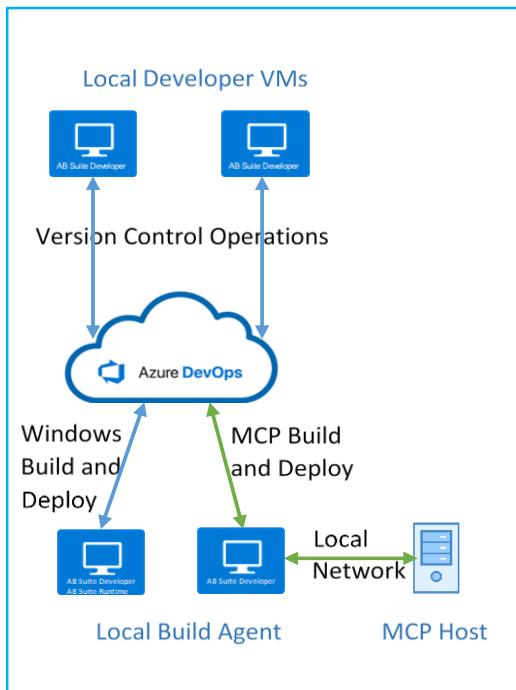
Cloud Theme

AB Suite Development in Azure Cloud

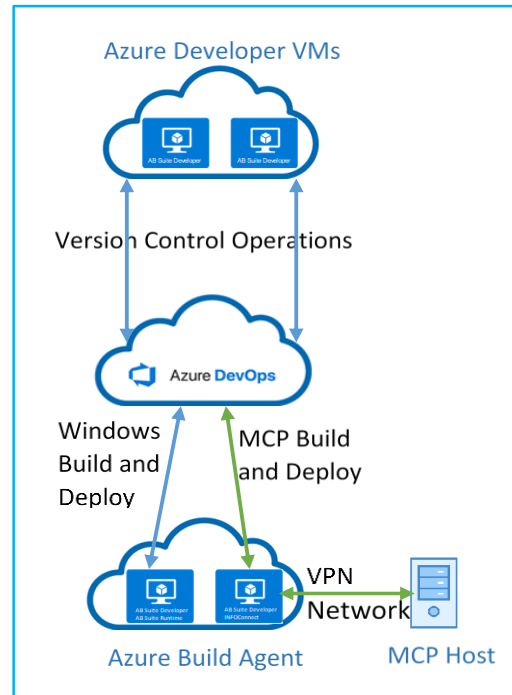


- Eliminate the burden of setting up new hardware for Dev environment.
- Faster setup of AB Suite Development environment
- Take advantage of a pre-configured image – a template that guides creation of VM
- Access from anywhere
- Test and development personnel can then easily delete these VMs when they're no longer needed.

AB Suite and Azure DevOps Services

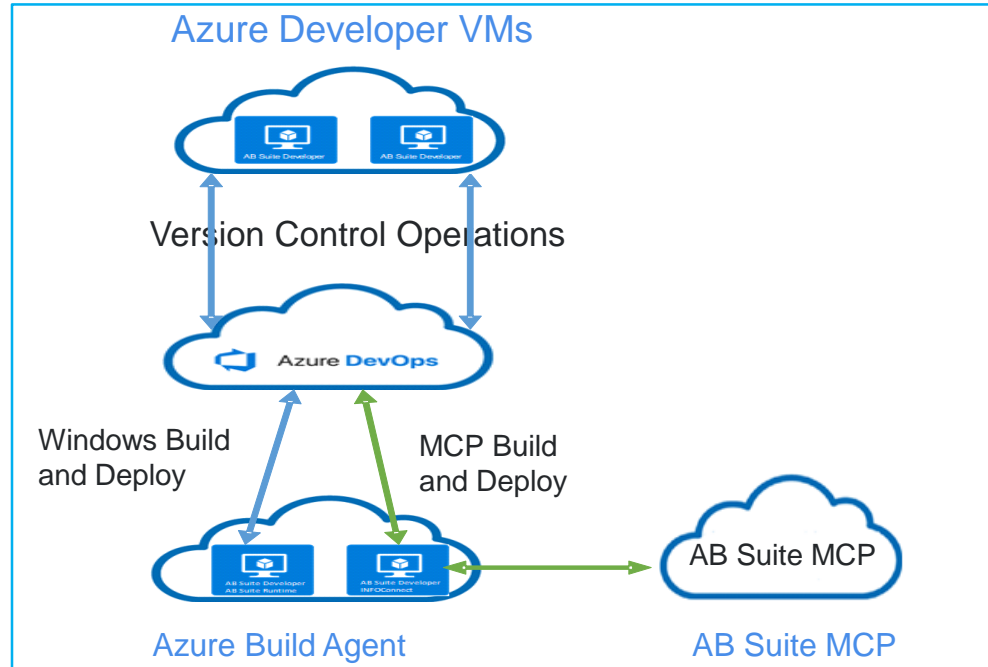


Use Case 1 - AB Suite Developer On-Premise and Azure DevOps Services



Use Case 2 - Both AB Suite Developer and Azure DevOps Services in Azure Public Cloud

AB Suite Runtime in Azure Cloud



Use Case 3 - All AB Suite Components - AB Suite Developer , Azure DevOps Services and AB Suite Runtime in Azure Public Cloud

AB Suite Cloud Journey – Milestones



Qualification with Azure (Sep 2019)

- Support AB Suite with Azure DevOps Services
- Support AB Suite for Windows Runtime on Azure Public Cloud

Qualification of AB Suite for MCP with Azure Public Cloud (Sep 2020)

- Support AB Suite MCP runtime on Azure Cloud
- Support AB Suite Windows runtime on both Azure and AWS Public Cloud

Future Directions

- Support AB Suite OS 2200 runtime on VMWare for Azure
- Cloud Native Features for AB Suite Windows

AB Suite for MCP Client Story – Transition to Cloud



Client Challenges

- Apps changes and volume due to the pandemic
- Apps Dev, DB dev, admin & ops challenges due to a retiring workforce

Solution

- AB Suite using ClearPath MCP Gold, MCP Dev studio
- Host it on the Azure Gov Cloud
- Unisys managing the following
 - AB Suite App dev/test/support
 - MCP Operations, admin & DB admin
 - Infra and Ops Management

Bank ABC



Delivering agile, secure and intuitive digital banking services

- **Business challenge**

- Maintain market leadership in the Middle East and grow in international markets.

- **Solution**

- Unisys Elevate™, core banking application and a cloud-based solution running on Amazon Web Services (AWS); Stealth™ to protect all transactions; CloudForte® consulting and integration services; AB Suite® for application development.

- **Results and benefits**

- Established a platform to successfully launch a new digital, mobile-only bank and attract a new generation of customers
- Enhanced customer experience with innovative banking products and services
- Gained the ability to support local banking requirements and the Arabic character-set
- Protected confidential customer data from malicious security threats

- **Client quote**

- “Unisys is a trusted partner that has helped us expand our business. They have enabled our vision of a customer-centric, secure, digital bank offering, available 24x7, delivered in the Cloud.”

Peter Hajszan, Head of Application Services, Bank ABC

Benefits of AB Suite Developer and Runtime in Cloud

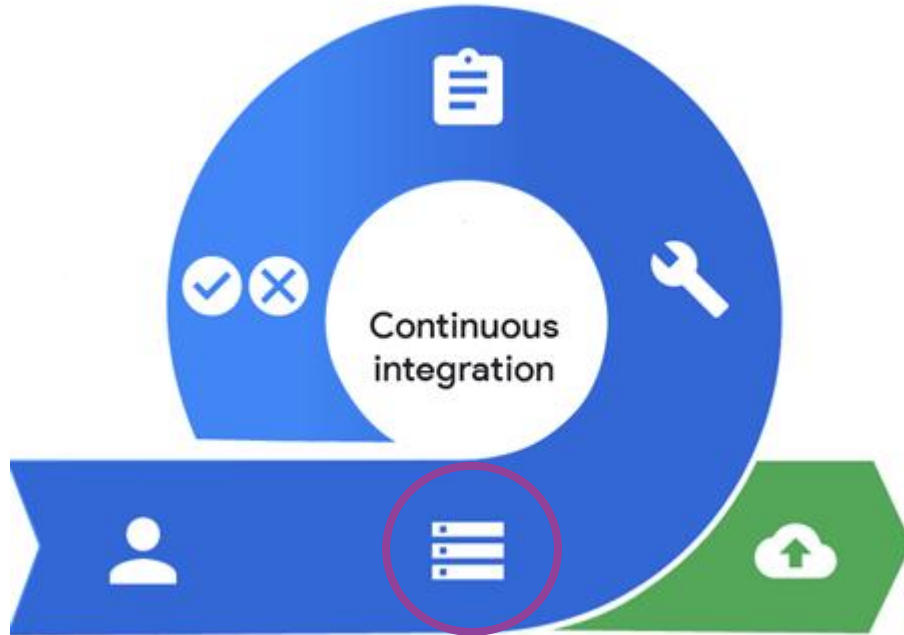


- Further your organization's cloud vision
 - By running your AB Suite applications in Azure, you will help to uphold "cloud first" strategy
- Smooth your cloud transition
 - Your organization can transition its on-premise investments to the cloud with ease.
 - You can do it with no required code changes, you'll greatly reduce risk along the way.
- Increased agility and Scalability



DevOps

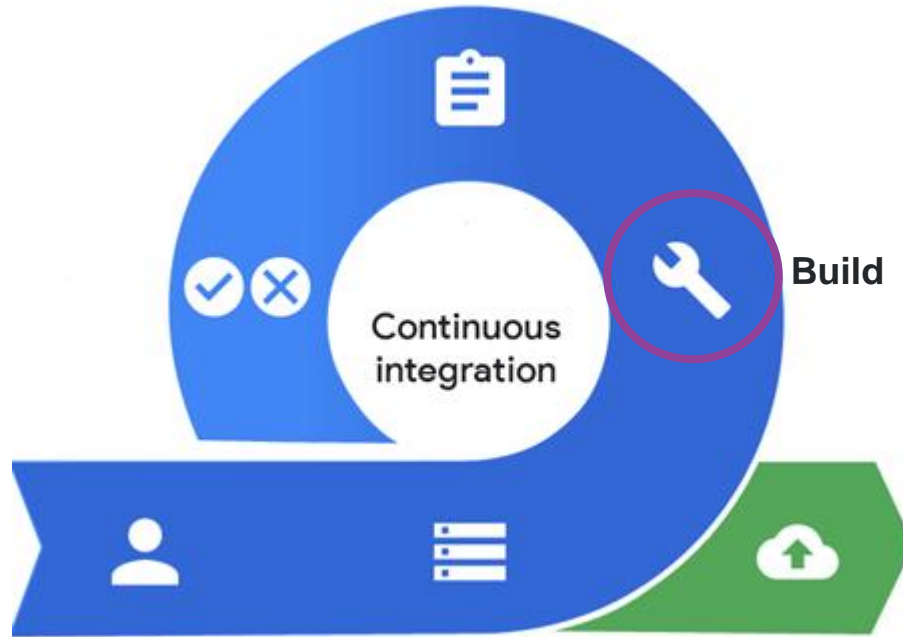
Continuous Integration – Source Control



Source Control

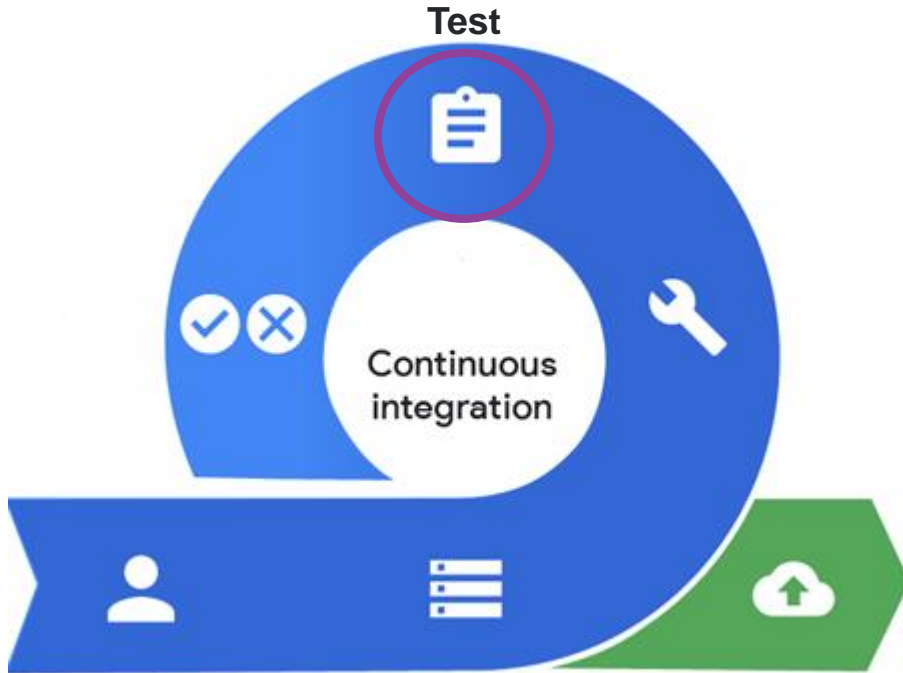
- **AB Suite** uses **Azure Repos with Team Foundation Version Control (TFVC)** for source control of your AB Suite models.
- Once configured it is remarkably **easy to add an AB Suite project to Azure Repos**, either as the project is being created or at any time after the fact.
- Using a recognized product like Azure Repos for source management means that you can use the **same version control product** for other development projects within your environment.

Continuous Integration - Build



- Team members submit work daily, or more frequently, and conduct builds after each change or set of changes.
- **With AB Suite Builder and Azure Pipelines, you can generate and deploy solutions in one step.**
- After you generate a solution the first time, the AB Suite Builder analyzes the changes since the last build and then generates only what is required to implement them.

Continuous Integration - Test



- AB Suite Automated Test Tool (ATT) enables continuous testing within an Azure DevOps Pipeline.
- AB Suite Automated Test Tool (ATT) can confirm an application continues to work as expected when the AB Suite model changes.
- ATT enforces quality by making unit and regression testing part of your standard check-in and build workflows

Continuous Delivery

- Continuous delivery takes continuous integration to the next level by extending the concept across the entire release chain, including QA and operations, helping teams confirm every change can be deployed to production, as business needs dictate
- Key Metrics to be monitored and continuously improved
 - Deployment Frequency
 - Lead time for Changes
 - Time to Restore



Security

Cyberattacks and Massive Data Fraud Are Among Top Risks



39

seconds

\$3.9

million

279

days

Security Features



Encryption Features

- DMSII Field Level Encryption and Structure level Encryption for AB Suite MCP
- SQL Server Transparent Data Encryption for AB Suite Windows

Secured Data Transfer

- Secured RATL for AB Suite MCP and Windows
- Secured FTP Transfer

Security during system administration

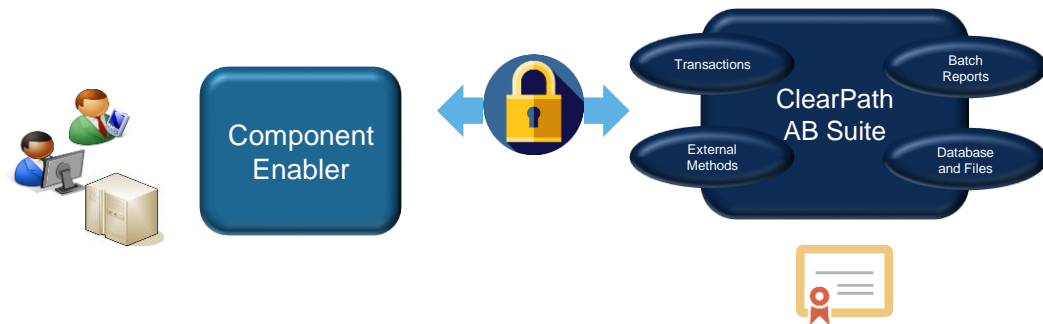
- Security for Sensitive Data
- Audit Trail Encryption & Compression

Tools for you to secure

- Your data in motion between the ClearPath Forward® and external clients
- Your data at rest in DMSII
 - Leveraging MCP 18 Encryption & MCP 19 Encryption
- Your ongoing System Administration



Data in motion: Secure RATL (TLS 1.2) on each side



ClearPath

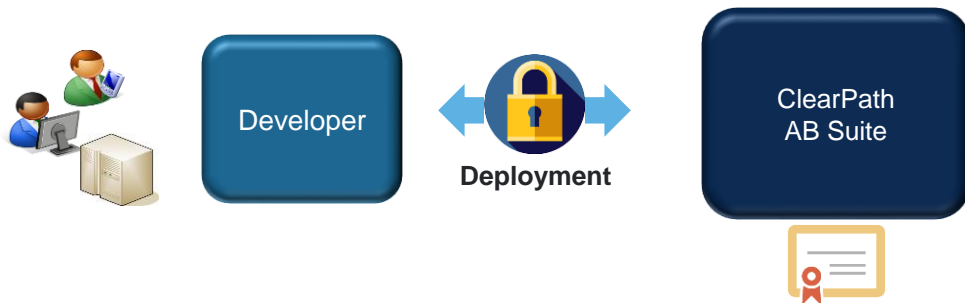
NA CCF RATLTLSPCM ADD VIEW SRSMPL APPLICATION

- Connection URL Format: x-ratlts:<hostname>:<port_number>
 - Ex: x-ratlts:absmcp:2009

Component Enabler:

```
65 <!-- SSL protocol default value 3072 (TLS1.2) and can update with below property, .  
66 To change the protocol value, please refer below url to identify the respective enum value  
67 "https://docs.microsoft.com/en-us/dotnet/api/system.security.authentication.sslprotocols?view=netframework-4.7.2"  
68 -->  
69 <add key="SslProtocolVersion" value="3072" />  
70  
71 <!-- Enter the Host View Name to be used by the Remote Access Server. -->  
72 <add key="HostViewName" value="SRSMPL" />  
73  
74 <!-- The connection mode attribute is used to inform the host application what type
```

Data in motion: Secure FTP (FTPS - TLS 1.2)



ClearPath

FTP Configuration file:

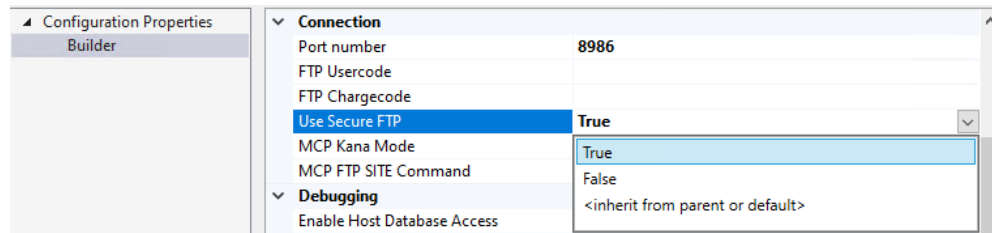
- AUTHMODE = SSL
- SSLMODE = IMPLICIT
- SSL_SERVICENAME = "FTPTLS" %Your Certificate name: requested via SecurityCenter, processed by a CA and then loaded via SecurityCenter
- INITIATE_SSL_SERVER = 1

TCPIP:

- NW TCPIP OPT + SSL

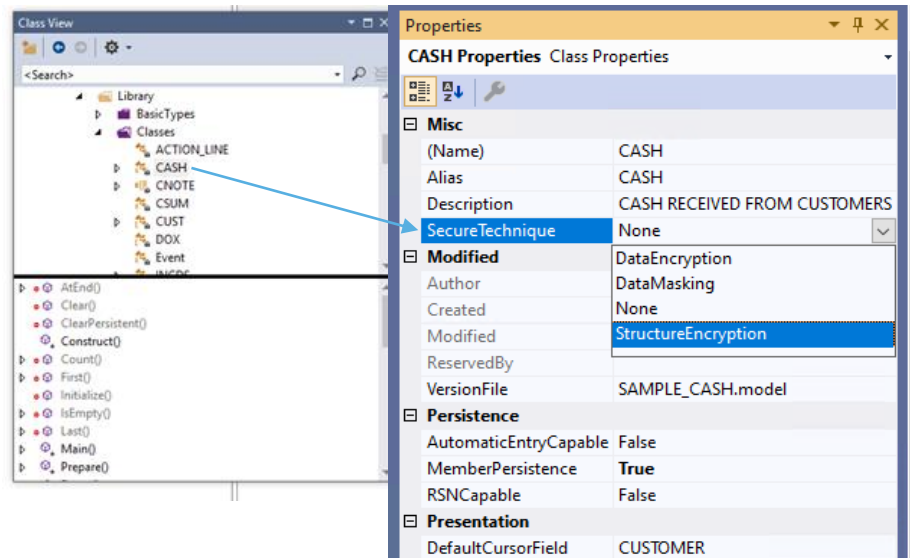
Developer

- Host Certificate loaded into Windows Trusted Store
- Set Use Secure FTP to True



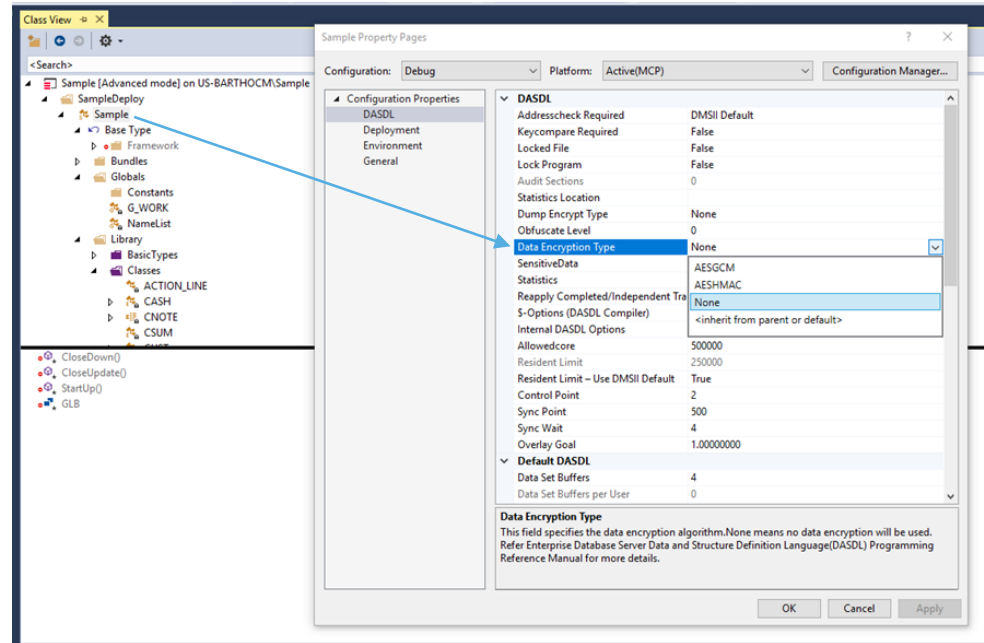
Data at Rest: Data Encryption/Data Masking - Class property

- Leverages DMSII 18.0 Field Level Encryption (FLE) and/or DMSII 19.0 Structure Level Encryption (SLE)
- Whether class data is encrypted or masked is a property (**SecureTechnique**) of the class, not an individual attribute
- For FLE and Data Masking, only individual attributes can be selected for encryption, not the entire class
- For SLE the whole class is encrypted
- Default value is None
- DMSII Data Masking support was introduced in AB Suite 5.0
- DMSII FLE support was introduced on AB Suite 7.0
- DMSII SLE support to be introduced in AB Suite 8.0



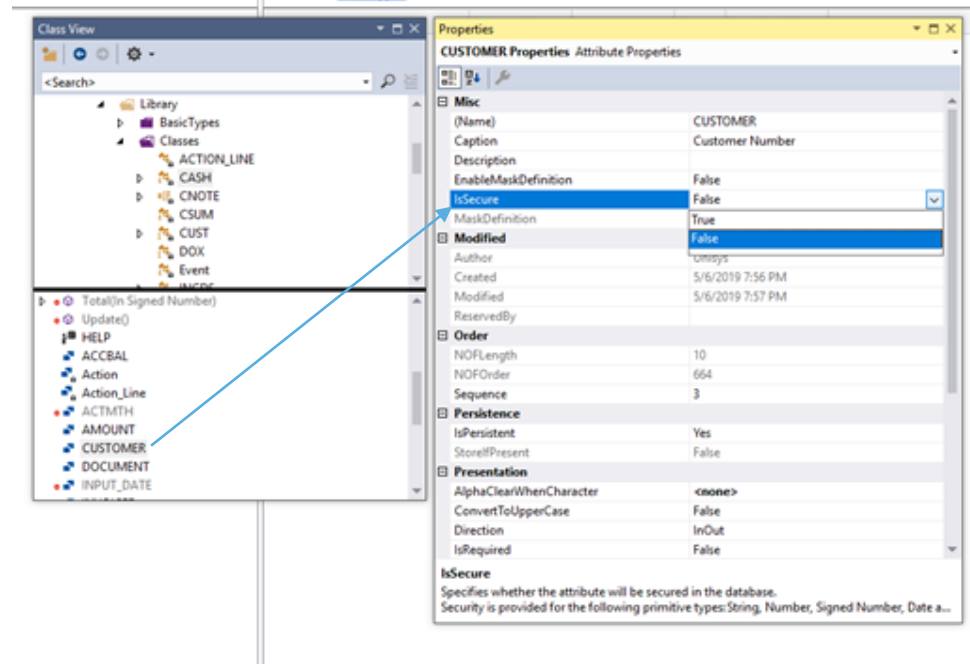
Encryption Algorithm Selected per Segment

- Enabling encryption and selecting which algorithm to use is a Segment property (**Data Encryption Type**)
- The algorithm choices are:
 - AESGCM – Supported for FLE & SLE
 - AESHMAC – Supported for FLE
 - (default is no encryption)
- If encryption is enabled on a class this will control which encryption algorithm will be used



Specifying individual attributes for FLE and Data Masking

- The ISPEC/Class properties define whether data is encrypted or masked
- The Segment properties define which encryption algorithm is used
- The property (**isSecure**) defines **if** the attributed will be secured
- There are some attributes that can not be encrypted e.g. key data, profile condition attributes



Data Security during system administration

- **DMSII SensitiveData** - Security for deleted persistent data
 - This is a Segment property
 - Provides additional security at the file system level
 - File records are scrubbed before being reused by the system
- **DMSII LogAccessDMVerbs** defined at the ISPEC level
 - Specify DMVerbs for logging
 - Logging of access to persistent data for auditing purposes
- **DMSII Audit Trail Encryption & Compression**
 - DMSII AUDITENCRYPT and COMPRESSED options
 - Encryption and compression occurs as the audit file is copied to tape



Microservices

Accelerate your Microservices initiative with ClearPath Application Integration Services

**Any
Integration
Interface**

Custom Development

**Faster Go to
Market**



Ease of Use



**ClearPath Outbound and
Inbound Capabilities**



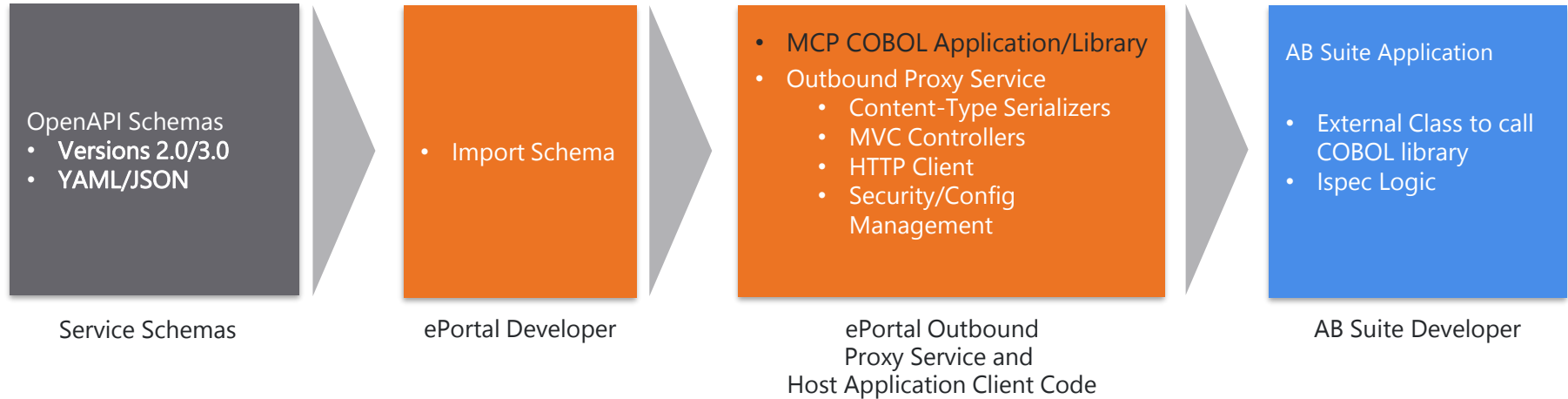
Secure Integration



**Support New Strategic
Business Initiatives**

AIS enables to integrate ClearPath with Microservices and Cloud

ePortal Outbound Services Communication

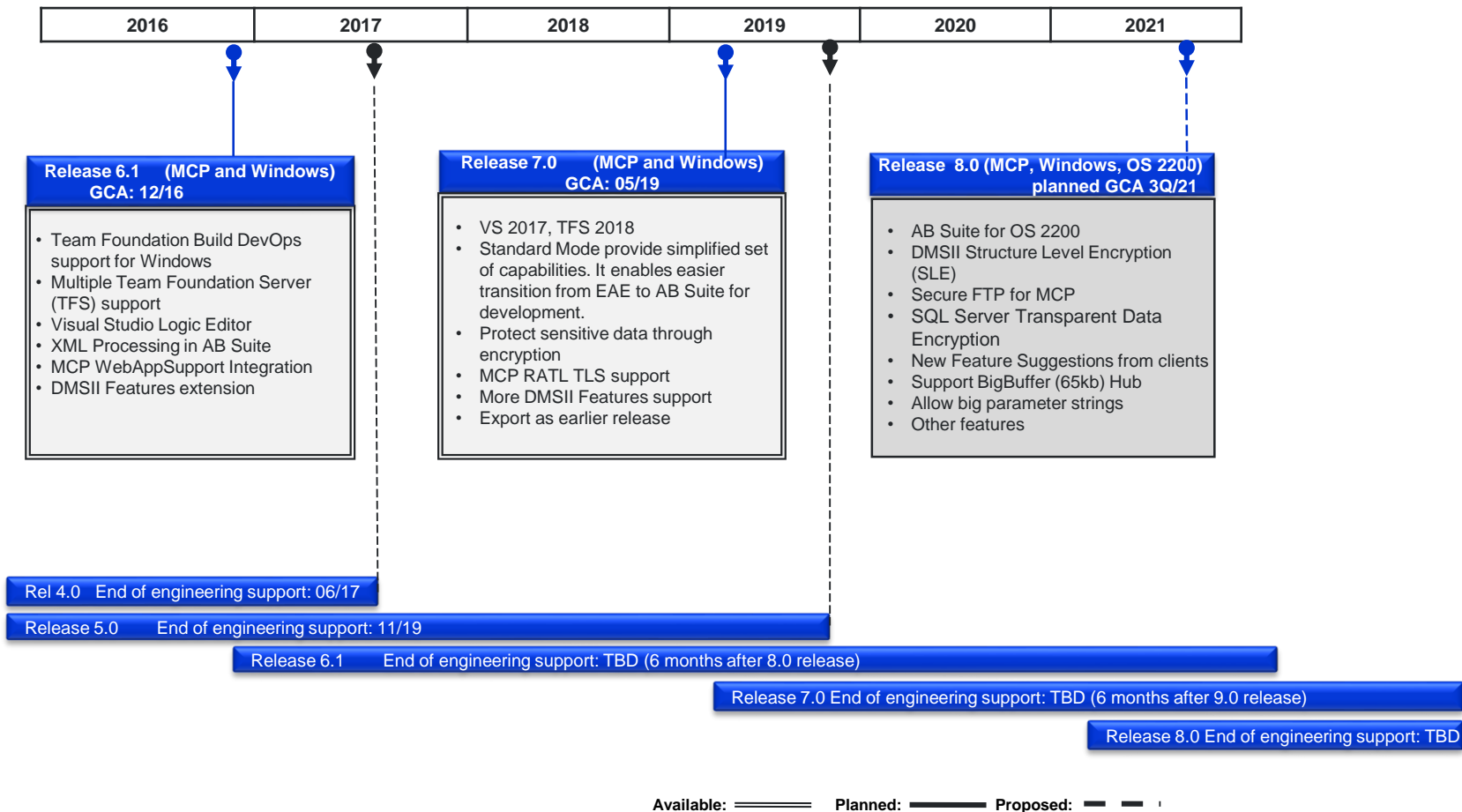




AB Suite Roadmap

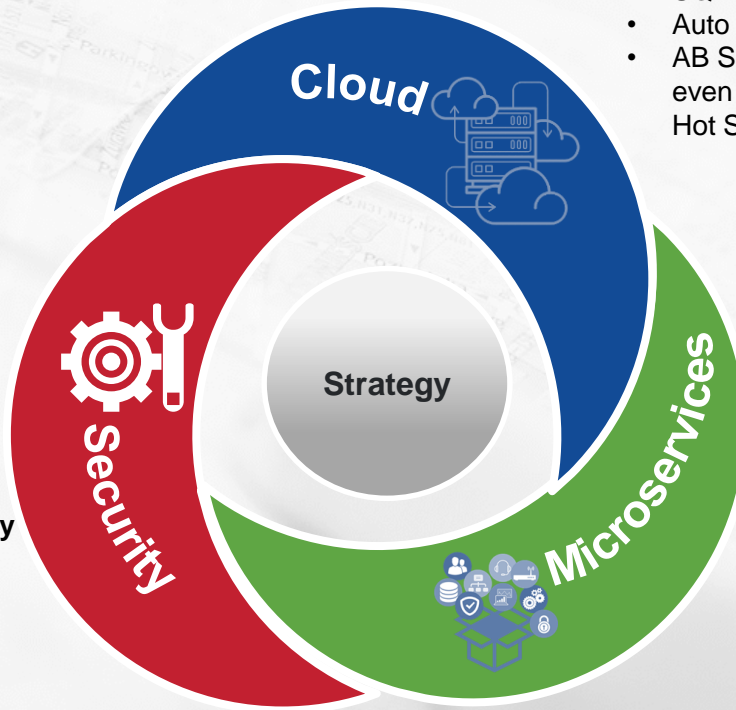
AB Suite Roadmap

↓ GCA date ↓ End of Engineering support (EOS) date



Roadmap content and dates subject to change

Strategic Priorities for AB Suite Future Releases



Cloud and HA capabilities

- SQL Server Always On
- Auto scaling
- AB Suite application availability even when it is patched or during Hot Swap

Microservices and Integration

- More streamlined integration with ePortal for calling external Web service.
- AB Suite MCP invoking a Docker container using the ClearPath MCP Extension Kit.

Enhanced Security

- Multi-factor authentication



Thank You