

IBM Cloud Transformation Advisor

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IBM Cloud Transformation Advisor

Quickly evaluate on-premises Java EE apps for deployment to the cloud

Provides recommendations and automation for App Modernization

Analysis Report

Potential issues, severity & possible solutions

Technology Report

Details on IBM platform support for technologies used in the app

Inventory Report

High-level inventory of application content and structure

Included in IBM Cloud Private, WebSphere 9.0.5 and IBM Cloud Pak for Applications



Introspects WebSphere, Tomcat, and WebLogic deployments



IBM Transformation Advisor

What's new

Welcome to Transformation Advisor

We know that migrating your existing WebSphere applications to the cloud can take you into unfamiliar terrain. Transformation Advisor will help you take your first steps toward getting your traditional WebSphere applications onto IBM Cloud Private.



Tired of this top section? Hide it

Let's get started.

Choose a workspace.

Add a new workspace

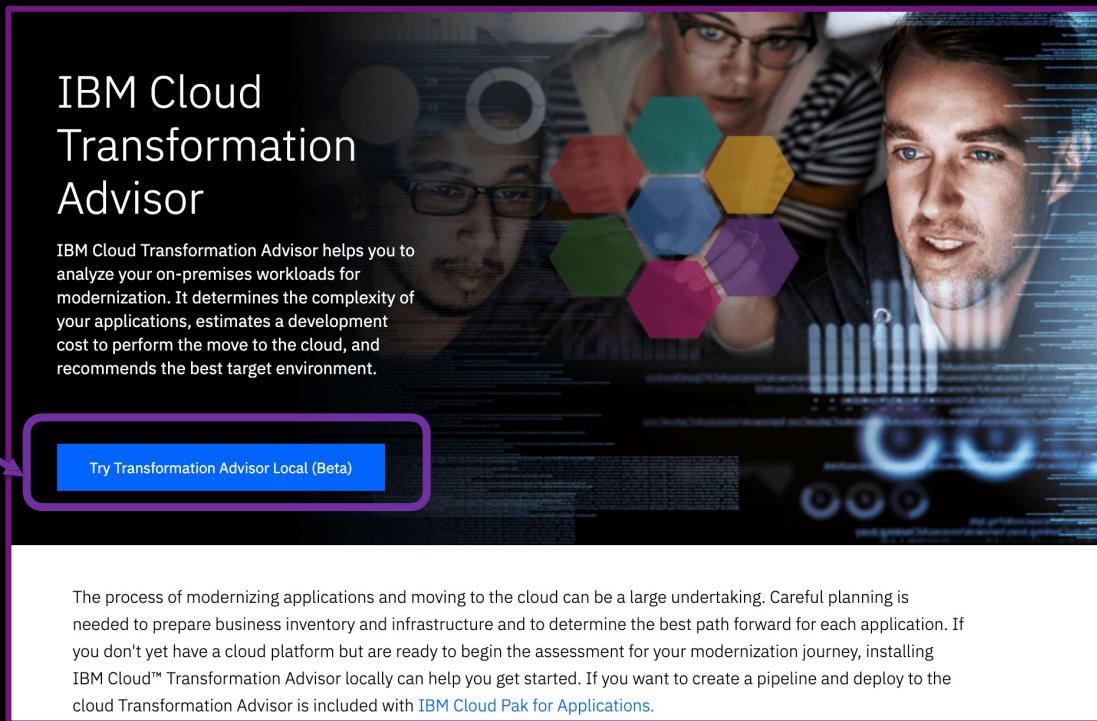


Transformation Advisor – Local Edition

Beta

<http://ibm.biz/cloudta>

Download
IBM Cloud
Transformation Advisor
to run it in Docker on
Linux,
MacOS,
Windows V10, or
Windows V7



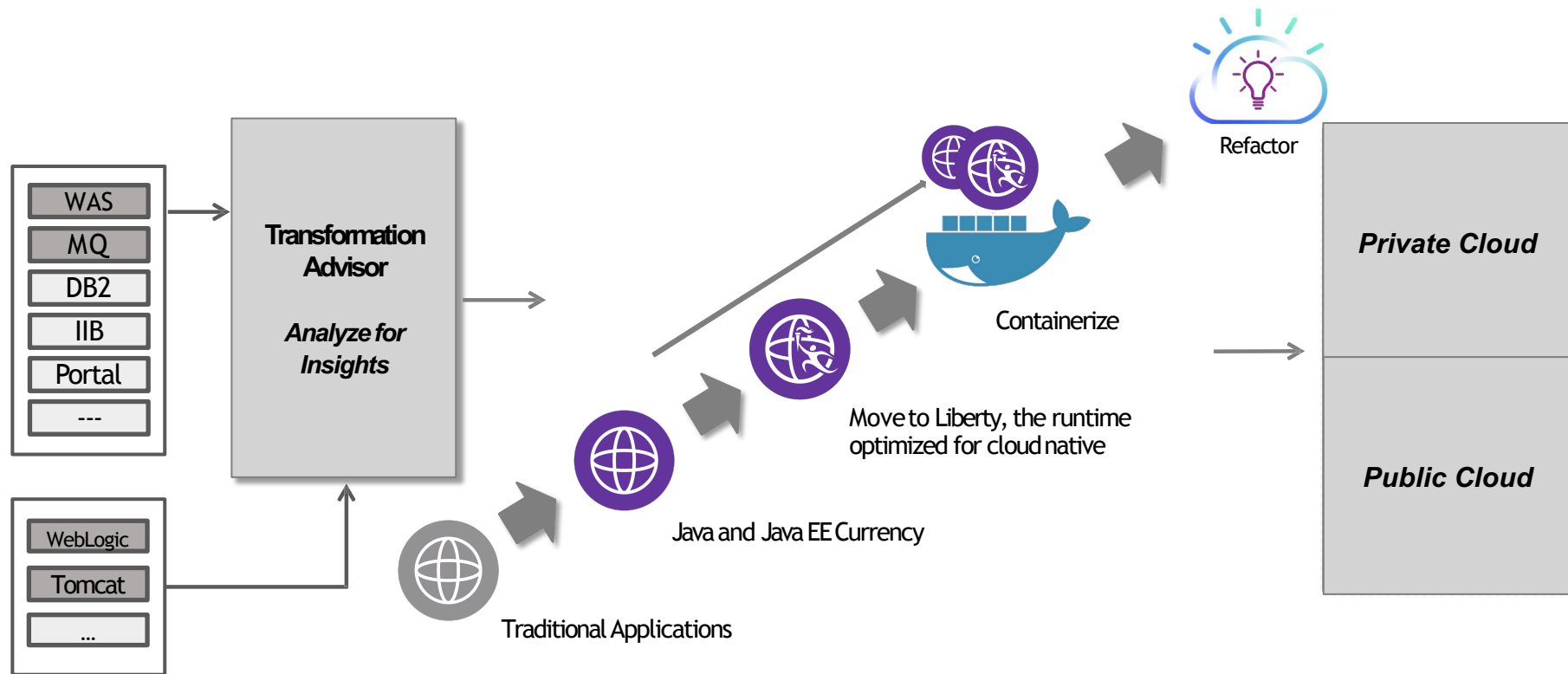
IBM Cloud Transformation Advisor

IBM Cloud Transformation Advisor helps you to analyze your on-premises workloads for modernization. It determines the complexity of your applications, estimates a development cost to perform the move to the cloud, and recommends the best target environment.

[Try Transformation Advisor Local \(Beta\)](#)

The process of modernizing applications and moving to the cloud can be a large undertaking. Careful planning is needed to prepare business inventory and infrastructure and to determine the best path forward for each application. If you don't yet have a cloud platform but are ready to begin the assessment for your modernization journey, installing IBM Cloud™ Transformation Advisor locally can help you get started. If you want to create a pipeline and deploy to the cloud Transformation Advisor is included with [IBM Cloud Pak for Applications](#).

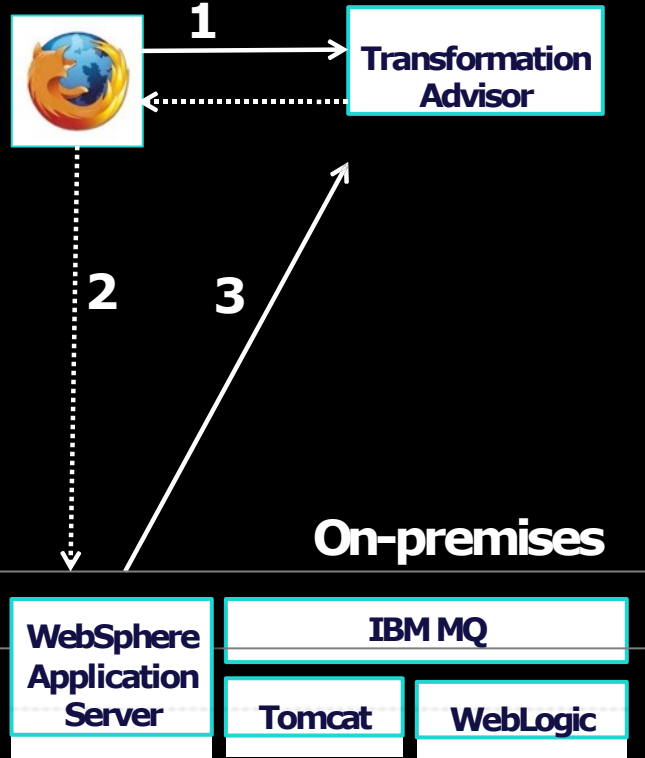
TA Accelerates the Modernization Journey



How Transformation Advisor Works

Demo





1. Access the TA user interface via a web browser and **Download the Data Collector** for your on-premise Java EE and/or IBM MQ runtime environment platform

2. **Execute the Data Collector** in each runtime environment you want to analyze. Supplying administrative access to the runtime will permit configuration data to be collected, providing optimum results.

The Data Collector gathers technology-specific information about your deployed applications, queue managers, and related configuration.

3. **Collected results are sent back** to TA when there is direct connectivity – or – the results zip file can be uploaded through the User Interface.

5. **TA analysis** considers app technology needs, config, dependencies, relationships, container and desired cloud impacts.
6. **TA provides insights and guidance** specific to each application and Queue Manager
7. **TA generates customized app artifacts.** Automates containerization and public and private cloud Kubernetes deployment

The image displays three screenshots of the IBM Cloud Transformation Advisor (TA) interface, illustrating its capabilities in analyzing applications and generating migration artifacts.

Top Left Screenshot: Recommendations

This view shows the 'Recommendations' page for a workspace named 'Think_2019'. It displays source environment details (IBM MQ), installation information (MQInstallation1, version 9.0.2.0), and preferred migration options (MQ on Private Cloud). A search bar is available to find items. Below, a list of items is shown, including 'Queue Manager' and 'ACCOUNTING.DELIVERY'.

Top Right Screenshot: Variety

This view shows the 'Variety' page for a workspace named 'ModResorts'. It displays source environment details (IBM WebSphere Application Server Network Deployment), profile information (DayTrader-Dmgr01, version 9.0.6.4), and preferred migration options (Liberty on Private Cloud). A table lists Java applications with their complexity, tech match, dependencies, issues, and estimated deployment cost.

Name	Complexity	Tech match	Dependencies	Issues	Est. dev cost in days
DayTrader-EE6.ear	Medium	100%	3	1	1
DefaultApplication.ear	Complex	88%	4	3	13
HealthServices.ear	Medium	50%	None	1	2
	Medium	80%	1	1	2
	Simple	100%	2	6	0

Bottom Screenshot: Migration Bundle

This view shows the 'Migration Bundle' page, indicating that the migration bundle is ready. It provides a 'Download bundle' button and lists migration files (server.xml, pom.xml, Operator resources, Dockerfile) for download. It also shows application dependencies (APPLICATION Binary) and a 'Send bundle to Git' button.

Valuable Insights at a Glance

- Runtime Inventory
- Complexity Classification
- *Technology Fit
- *List of Dependencies
- Issues to be Tackled
- Resolution Estimate

*Java EE Applications




The screenshot displays the IBM Cloud Transformation Advisor interface. The left sidebar shows the navigation menu with 'Workspace' (Think_2019), 'Collections' (AppSrv01, ModResorts, StockTrader), and 'Business apps' (0 apps created). The main content area is titled 'Variety' and shows details for the 'ModResorts' collection. It includes a search bar, a table of Java applications, and an 'Export' button. The table lists applications with their complexity, tech match, dependencies, issues, and estimated development cost.

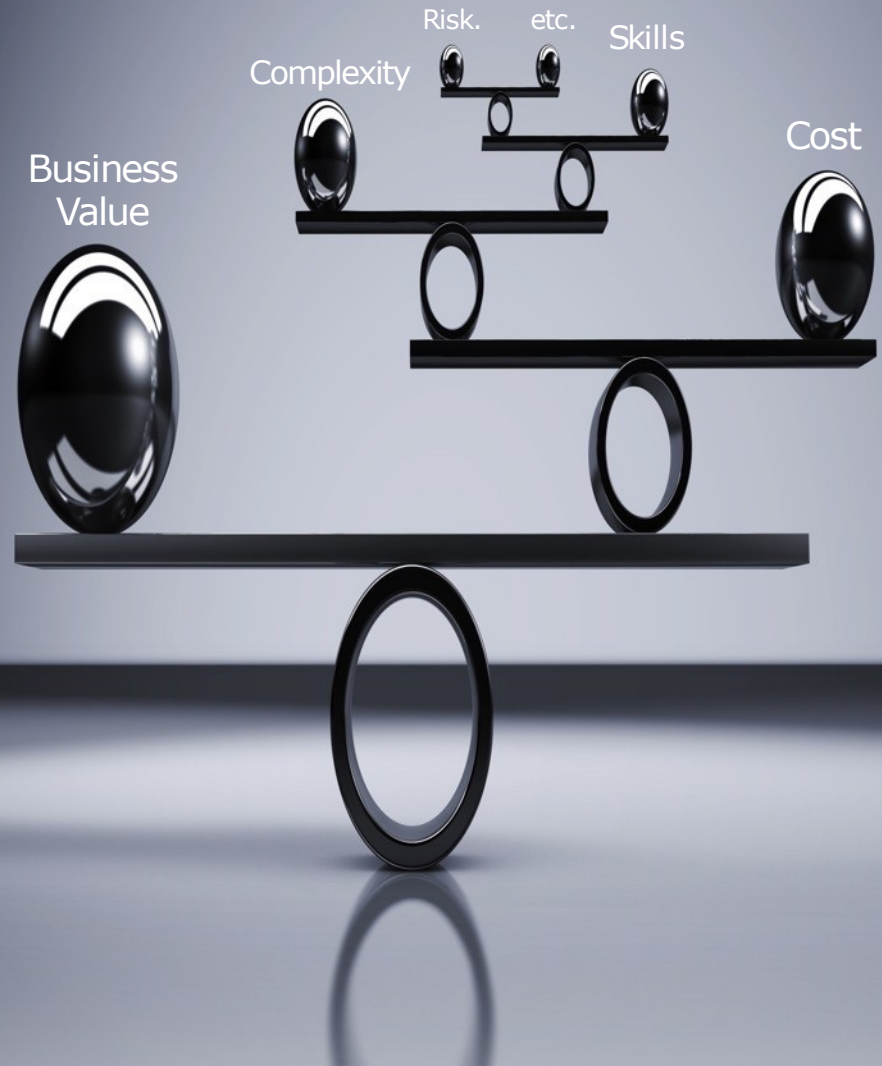
Name	Complexity	Tech match	Dependencies	Issues	Est. dev cost in days
DayTrader-EE6.ear	Moderate	100%	3	1	6
DefaultApplication.ear	Complex	88%	4	3	5
HealthServices.ear	Moderate	50%	None	1	2
HealthServicesClient.ear	Moderate	80%	1	1	3
jpetstore_war.ear	Simple	100%	2	6	0

The screenshot displays the IBM Cloud Transformation Advisor interface. The left sidebar shows the navigation menu with 'Workspace' (Think_2019), 'Collections' (AppSrv01, ModResorts, StockTrader), and 'Business apps' (0 apps created). The main content area is titled 'Recommendations' and shows details for the 'ModResorts' collection. It includes a search bar, a table of recommendations, and an 'Export' button. The table lists recommendations with their source environment, installation, and preferred migration.


Source environment	Installation	Preferred migration
IBM MQ	MQInstallation1 Version: 9.0.2.0	MQ on Private Cloud

Modernization Complexity

Complexity	Java EE	IBM MQ
Simple 	Nocode changes needed	DNS reconfiguration required
Moderate 	Code changes required	Cluster reconfiguration ,changing custom logic (e.g. Exits)
Complex 	Incompatible technologies; external dependencies	Client Authentication reconfiguration



WebSphere Application Server Migration Toolkit



WebSphere Application Server Migration Toolkit

ASSET TYPE: TOOL

The migration toolkit provides Eclipse-based tools for WebSphere migration scenarios including Cloud migration, WebSphere version to version migration including WAS Liberty, and migration from third-party application servers.

Download

- Scans application source code in the Eclipse IDE
- Click-and-go to affected code line
- Variety of scenarios:
 - On-premise cloud
 - WebSphere traditional to WebSphere Liberty
 - Competitive Application Servers to WebSphere
- Download: <http://ibm.biz/WAMT4Eclipse> or the EclipseMarketplace

WebSphere Application Server Migration Toolkit

Resource - PlantsByWebSphere/src/com/ibm/websphere/samples/pbw/war/ShoppingBean.java - Eclipse Platform

File Edit Source Refactor Navigate Search Project Test Run Window Help

Project Explorer Package Explorer

PlantsByWebSphere

- Deployment Descriptor: PlantsByW
- JAX-WS Web Services
- Java Resources
 - src
 - com.ibm.websphere.samples.
 - com.ibm.websphere.samples.
 - com.ibm.websphere.samples.
 - AccountBean.java
 - AccountServlet.java
 - AdminServlet.java
 - BackOrderItem.java
 - HelpBean.java
 - ImageServlet.java
 - LoginInfo.java
 - MailAction.java
 - OrderInfo.java
 - populate.java

Outline Task List

- performRecalculate() : String
- performShopping() : String
- getCartItems() : Collection<Shop
- getProduct() : ProductBean

ShoppingBean.java

```
public Collection<ProductBean> getProducts () {  
    return this.products;  
}  
  
public String getShippingCostString () {  
    return NumberFormat.getCurrencyInstance (Locale.US).format  
        (this.shippingCost);  
}  
  
/**  
 * @return the shippingCost  
 */  
public float getShippingCost() {  
    return shippingCost;  
}
```

Tasks Software Analyzer Results

Java Migration (16/03/14 14:11:39)

Java Code Review

View as: Tree

- Java SE version migration [2 results in 44ms]
 - Java SE 8 compatibility impacts [2 results in 37ms]
 - Behavior change in rounding in NumberFormat and DecimalFormat
 - ShoppingBean.java:155 Behavior change in rounding in Nur
 - ShoppingBean.java:175 Behavior change in rounding in Nur


Help Contents Search Related Topics Bookmarks Index

Behavior change in rounding in NumberFormat and DecimalFormat format methods

Java 8 introduces a behavior change in the rounding behavior of decimal numbers using the `format` method on the `java.text.NumberFormat` and the `java.text.DecimalFormat` classes when the value is very close to a tie, sitting exactly at the rounding position specified in the formatting pattern. The change affects numbers with a binary numeric representation that is not exact.

For example, the closest binary approximation of 0.015 that a computer can reach is 0.0149999999999999944888487687...

Migration Toolkit for Application Binaries



Migration Toolkit for Application Binaries

ASSET TYPE: TOOL

The Migration Toolkit for Application Binaries provides a command line tool that quickly evaluates application binaries for rapid deployment on newer versions of WebSphere Application Server traditional or Liberty.

Download

- Scans application binaries from the command line
- Available to developers who do not use Eclipse
- Variety of scenarios:
 - On-premise → cloud
 - WebSphere traditional → WebSphere Liberty
 - Competitive Application Servers → WebSphere
- Download: https://developer.ibm.com/wasdev/downloads/#asset/tools-Migration_Toolkit_for_Application_Binaries

IBM Cloud Transformation Advisor

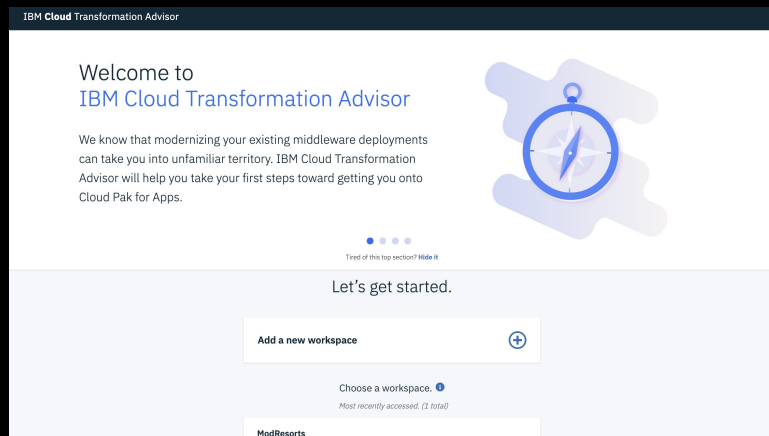
Collects information about your existing Java EE Applications, Java, and MQ Environments, combines that with rules and insights gained from years of migrating and modernizing applications and middleware, and provides recommendations for your cloud journey

CHALLENGES ADDRESSED

- Leveraging existing application logic
- Need to accelerate application development and maintenance
- Monolithic applications that are complex and tightly coupled

BENEFITS

- Provides recommendations, guidance and artifacts for deployment in Liberty containers and Kubernetes clouds
- Introspects existing WebSphere, IBM MQ, WebLogic, and Tomcat deployments
- Categorize effort either as Simple, Medium, or Complex to re-platform on the cloud



IBM Cloud Transformation Advisor

Resources

14



Resources – TA and Migration Tools

- Transformation Advisor (TALocal) - <https://ibm.biz/cloudta>
- WebSphere Application Migration Toolkit - https://developer.ibm.com/wasdev/downloads/#asset/tools-WebSphere_Application_Server_Migration_Toolkit
- Migration Toolkit for Application Binaries - https://developer.ibm.com/wasdev/downloads/#asset/tools-Migration_Toolkit_for_Application_Binaries

Resources – Modernization Labs

- Follow the click-through product tour of TA:
<https://www.ibm.com/cloud/garage/dte/producttour/evaluate-prem-websphere-application-migration>
- Part one of the App Modernization labs:
<https://www.ibm.com/cloud/garage/dte/tutorial/cloud-enabled-use-case-app-modernization-journey-part-1>
- Part two of the App Modernization labs:
<https://www.ibm.com/cloud/garage/dte/tutorial/move-prem-websphere-app-cloud-transformation-advisor>
- If the labs above don't work for you, we can reserve Blue Demos for you.
 - <https://bluedemos.com/show/2459>

Resources – OpenLiberty

- Open Liberty - <https://openliberty.io/>
 - Source - <https://github.com/openliberty>
 - Guides - <https://openliberty.io/guides/>
 - Performance - <https://openliberty.io/blog/2019/10/30/faster-startup-open-liberty.html>
 - See the new dev mode - <https://openliberty.io/guides/rest-intro.html>
- WebSphere Customer Advisory Board - <http://ibm.biz/WebSphereAdvisoryBoard>

Resources – DockerImages

- Open Liberty - https://hub.docker.com/_/open-liberty
- Open Liberty UBI images - <https://hub.docker.com/r/openliberty/open-liberty>
- Traditional WebSphere - <https://hub.docker.com/r/ibmcom/websphere-traditional/>
 - Best practices - <https://github.com/WASdev/ci.docker.websphere-traditional#docker-hub-image>

WebSphere Customer Advisory Board – open invitation

email: claudiab@us.ibm.com

Sign up
now at
Think

Influence
deliverables

Choose your engagement level:

1. **Stay ahead of the curve:** more time commitment
2. **Close the gap:** quarterly involvement
3. **At your own pace:** impact longer term goals

**Get involved.
Be successful.**



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