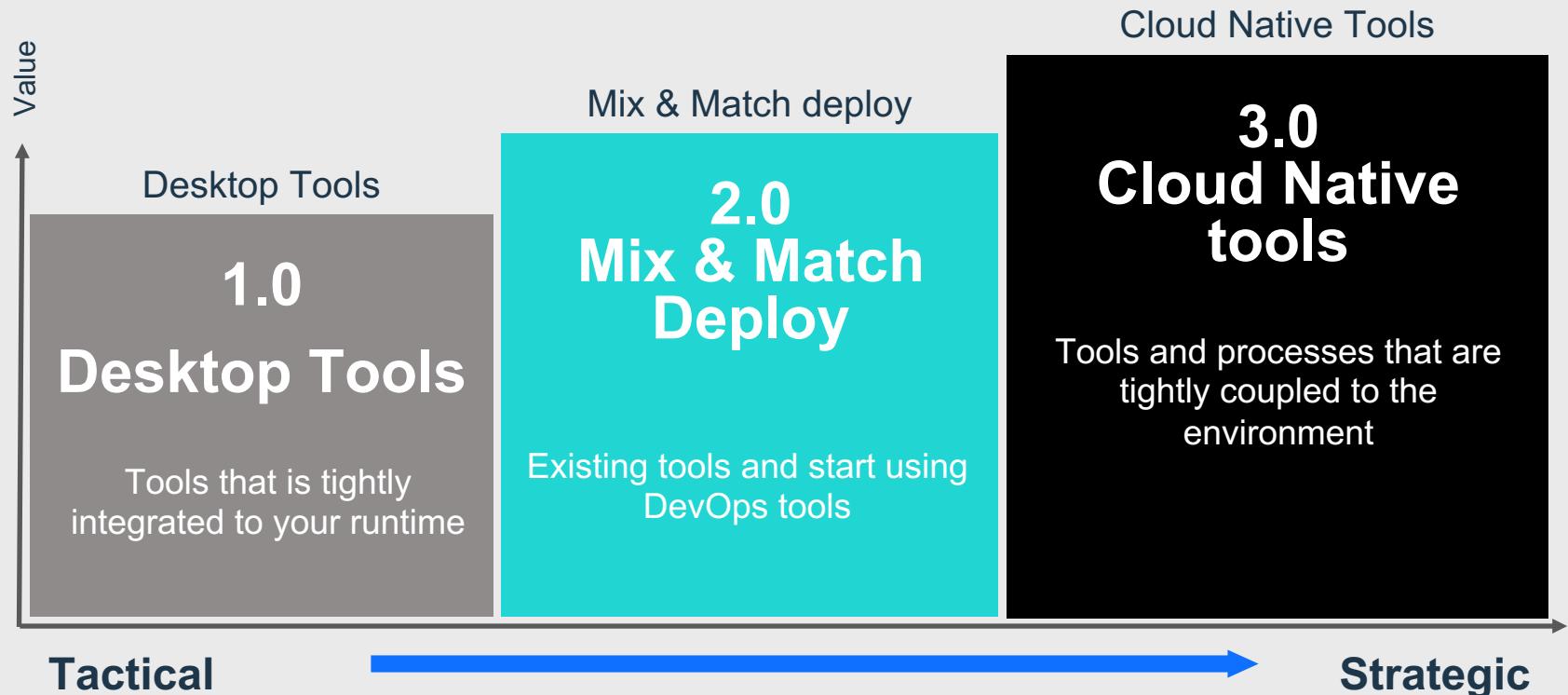


# Microclimate

## Overview and Strategy



# The cloud has evolved as the technology for transformation



# Multi-cloud is the key to organizational agility

8 out of 10 committing to Multi-Cloud

71% use 3 or more clouds



Getting new value from  
third parties

Extracting value from  
your entire business

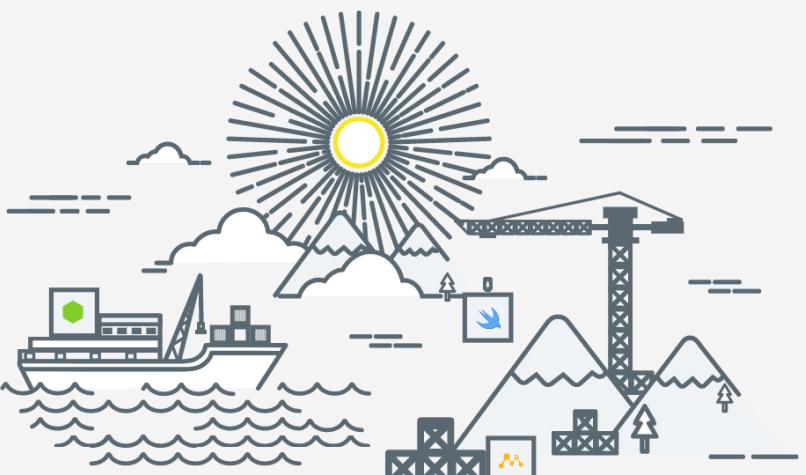
Need tools that take advantage of the cloud  
platform

# <https://microclimate-dev2ops.github.io/>

Microclimate Projects 

## Welcome to Microclimate

Ready for a fast, incremental, intelligent, end-to-end development experience that puts you in charge? Create a new project to get started!



New project Import project

# **DEMO**

# Microclimate - an end to end development platform to develop, build, test and deploy code



## Choice with consistency



## Hybrid integration



## DevOps productivity



## Powerful, accessible data and analytics



## Cognitive solutions

Get started quickly with choice of programming languages

Fast development cycle to develop, build, test to maximize team agility

Integrated DevOps experience that supports deployment to IBM Cloud Private

### Seamless Experience

Regardless of where your development experience started, you get a single, seamless experience.

# Key use cases

1

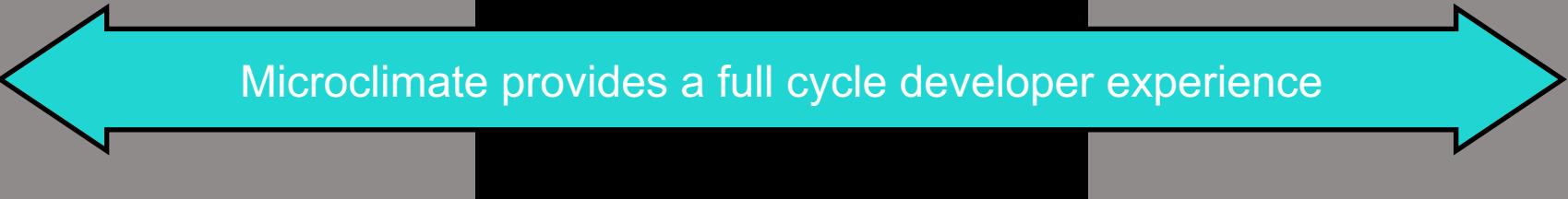
Simplify the creation  
and deployment of  
microservices

2

Modernize and  
optimize existing  
applications

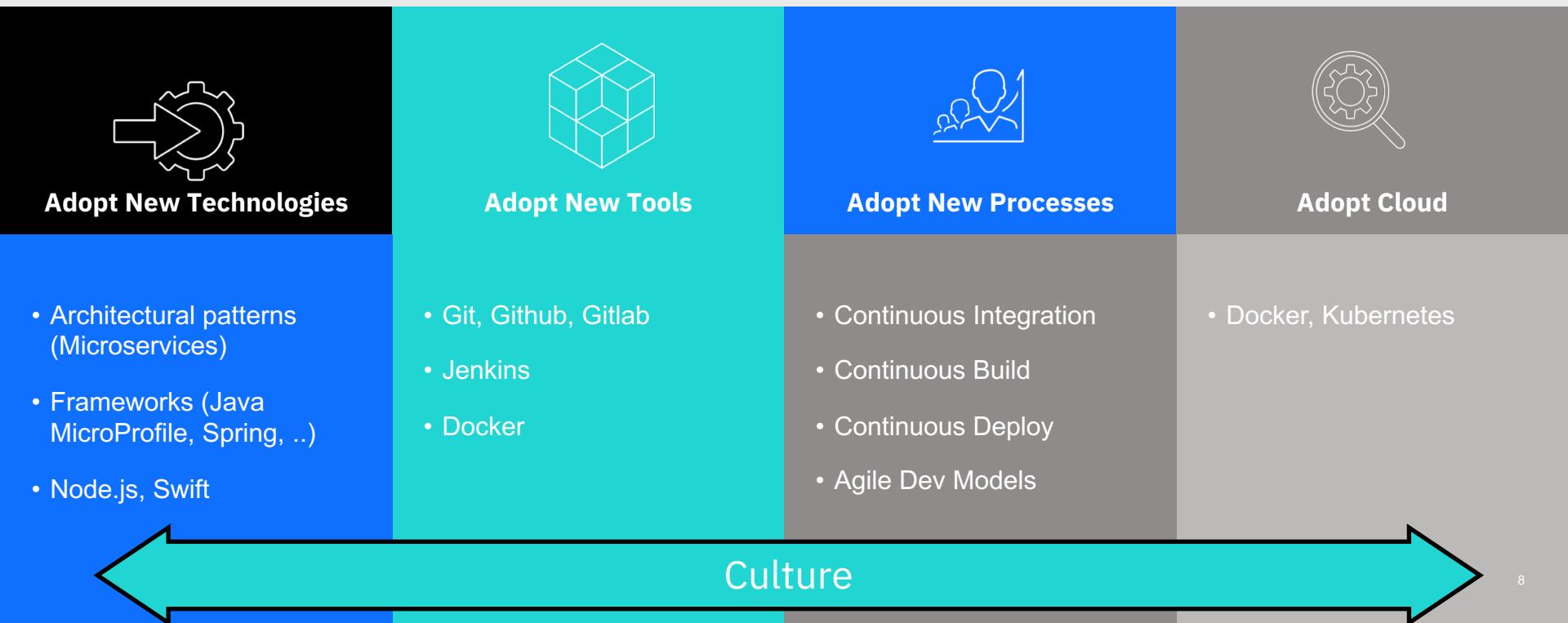
3

Embrace new  
programming practices  
such as agile and  
DevOps



Microclimate provides a full cycle developer experience

# Microclimate supports your entry point for transformation:



# Built with open standards, to support developer choice



by Pivotal.

Support for popular  
Java stacks  
including Java  
EE/MicroProfile and  
Spring

**Java**



Multiple language  
support for Node  
and Swift

**Polyglot**



Speed and agility  
with safety using  
integrated DevOps

**Pipeline**



**kubernetes**

Manage containers  
at scale

**Containers**

# Solution overview



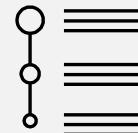
## Quick start samples and import capability

Get started quickly and stay on pace



## Rapid iteration

Quickly enhance, build and test



## Intelligent feedback and diagnostics

Fast development with real time feedback



## Integrated DevOps pipeline

Get into production fast with a preconfigured DevOps pipeline

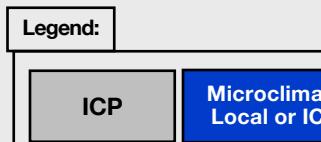
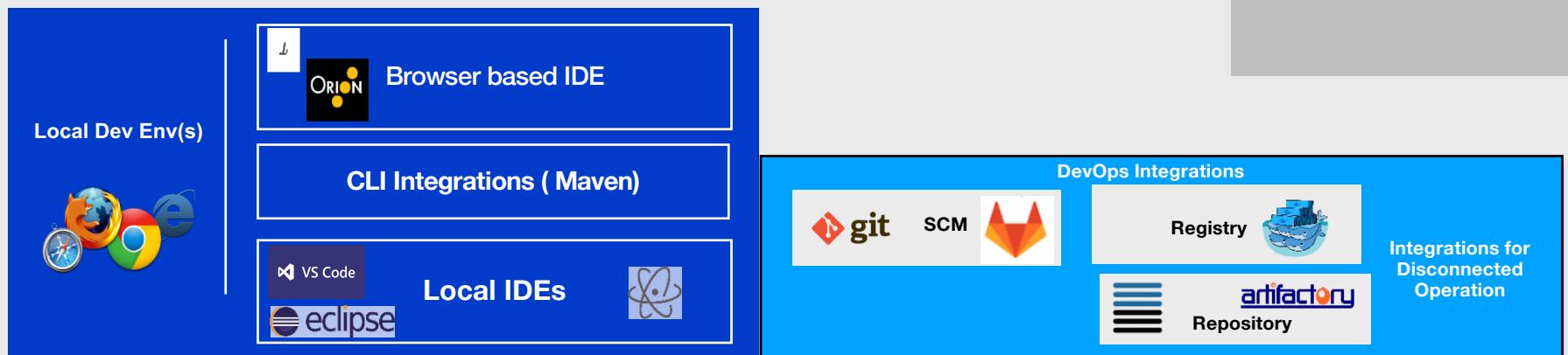
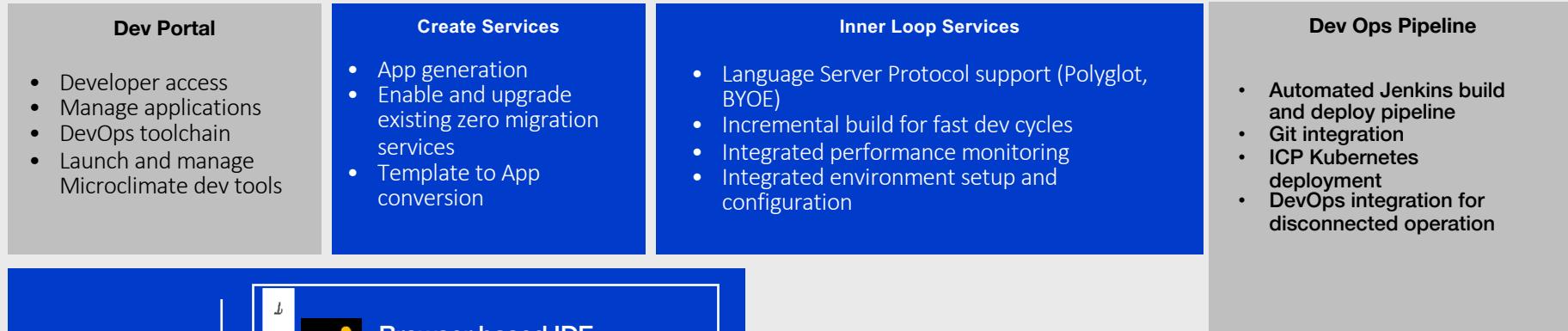
Free download to run locally or on IBM Cloud Private



## Strategic Value:

Integration with IBM Cloud Private gives you an integrated developer platform for developing, building, testing, and deploying code

# Microclimate scope



# Different ways to begin

Create new cloud native applications using:

- Java (MicroProfile, Spring Cloud)
- Node
- Swift

OR

Import an existing service from:

- Git repository
- Local disk
- Archive

The image consists of two side-by-side screenshots of a software application interface. The top screenshot shows the 'Projects' tab of the Microclimate interface, displaying two projects: 'nodeapp' (green dot) and 'test1' (red dot), both listed under the 'Language: node' category. The bottom screenshot shows the 'Import project' tab, where a GitHub URL (<https://github.ibm.com/dev-ex/mcholidays.git>) has been entered into the 'Select location' field. Below this, there are three radio button options: 'GitHub' (selected), 'Local project' (with a 'Select project folder' button), and 'Project archive' (with a 'Select archive file' button). At the bottom of the interface are buttons for 'New project', 'Import project', 'Cancel', and 'Next'.

# Rapid onboarding and app creation

The screenshot shows the Microclimate web interface under the 'Projects' tab. It displays a search bar and a list of available project languages: Java (.java), JS (.js), and Swift (.swift). A 'nodeapp' project is selected, and its configuration details are shown, including the language as 'node'. A large black rectangular area is present on the right side of the interface.

Hosted on ICP, containerized install, or command line tools



## Web-based IDE supporting full lifecycle or BYOE

The screenshot shows the Microclimate web IDE interface. On the left, there's a sidebar with navigation links like 'Edit code', 'Open app', 'App logs', and 'App monitor'. The main area has tabs for 'nodeapp' and 'microclimate-dash'. The 'nodeapp' tab contains a code editor with Node.js code, and the 'microclimate-dash' tab contains a terminal window with some log output.

Included web IDE or bring your own



Powered by

Language Server Protocol (LSP)

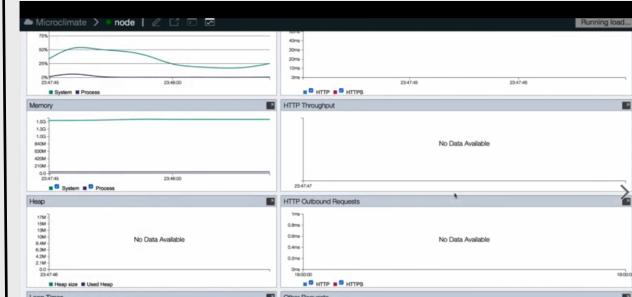
Edit

## Rapid Dev Cycle (Inner Loop)

Test

Compile

Instant monitoring and feedback



Consistent tools from dev to ops

# Language server protocols

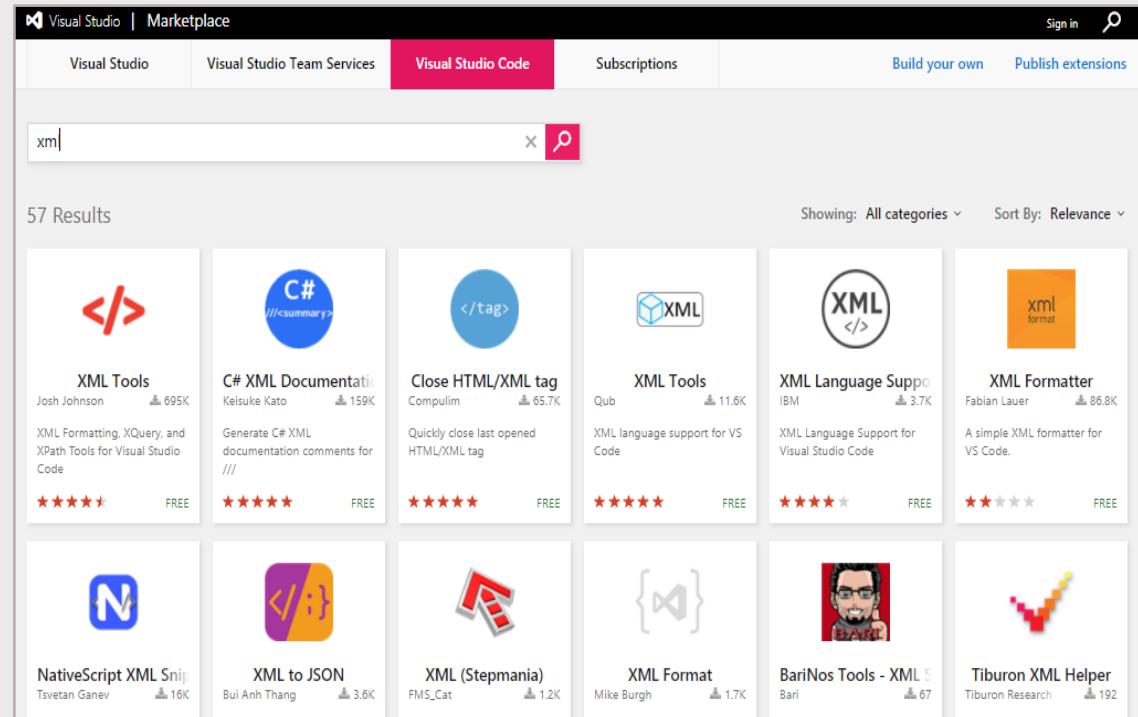
Language Server Protocol (LSP) provides for language services with an uplift to cognitive capabilities on cloud for supporting editors.

1

The Language Server Protocol allows for decoupling language services from the editor so services may be contained within a general purpose *language server*.

2

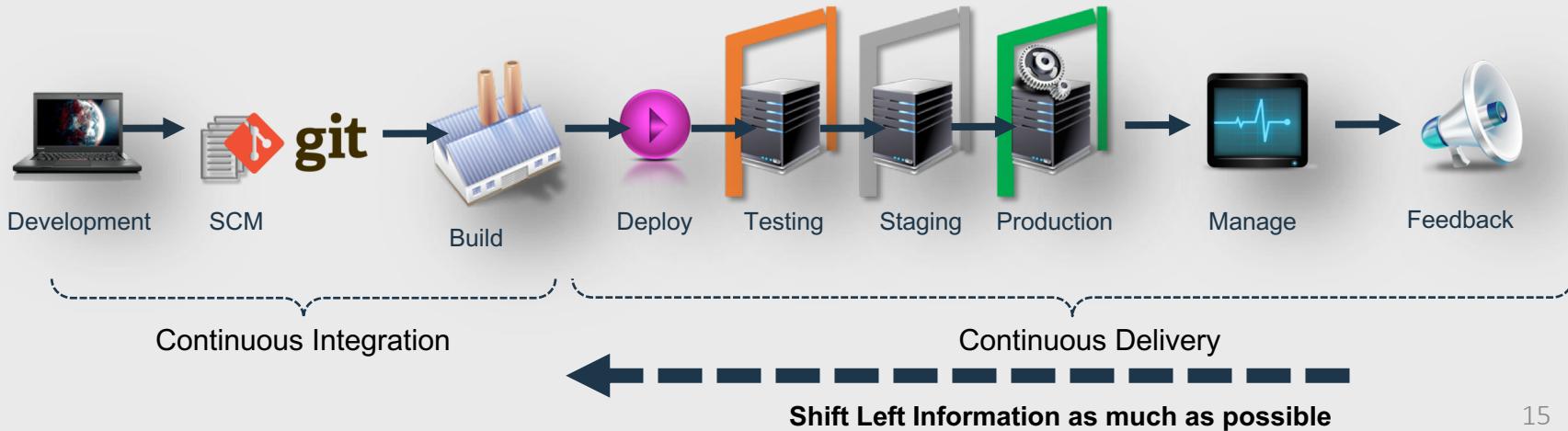
Any editor can inherit sophisticated support for many different languages by making use of existing language servers.



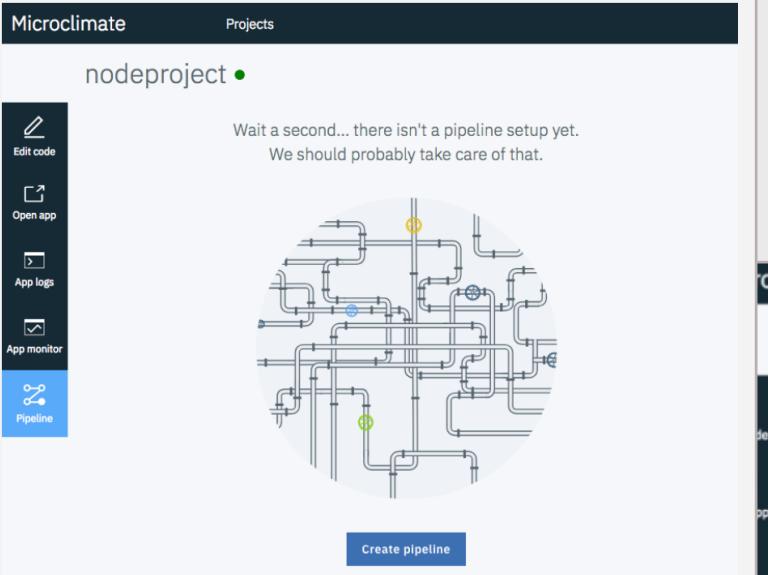
# Dev-Ops-Dev-Ops-Dev...

Innovate and improve client experience by speeding the customer feedback loop by being agile.

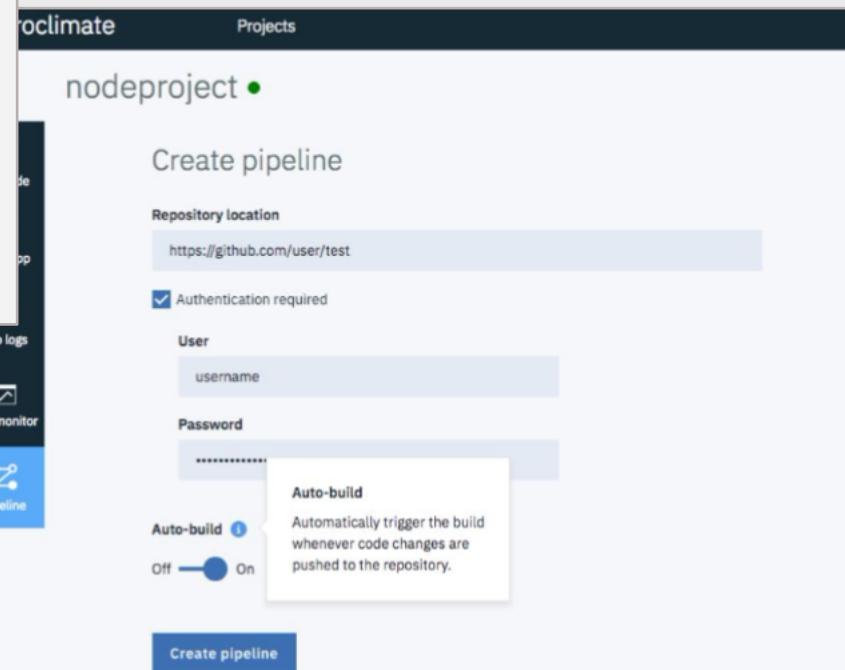
Flow information back to development by bringing ops information back to dev allowing the team to work on constant improvement.



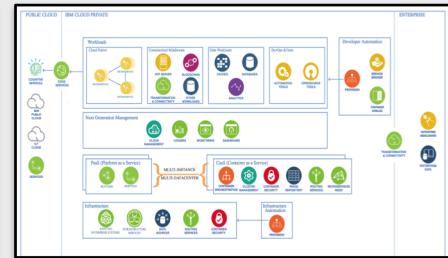
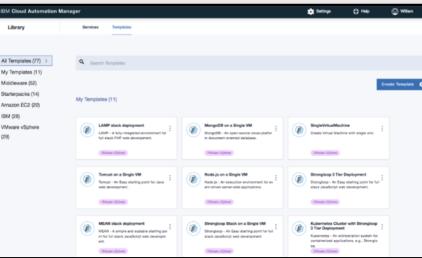
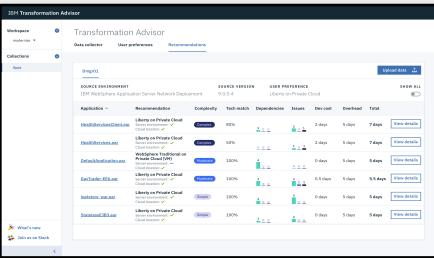
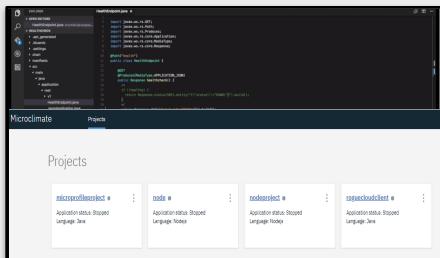
# Microclimate DevOps Pipeline



Easily create a new pipeline in Microclimate by providing the repository location and the necessary credentials.



# Microclimate – Part of the solution to accelerate modernization



## Microclimate

End-to-End development experience

## Transformation Advisor

Assess and plan  
Prescriptive guidance

## Cloud Automation Manager

Multi-cloud provisioning and management

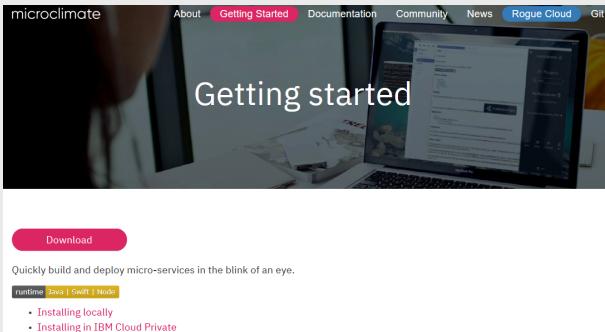
## IBM Cloud Garage

Best practices  
Reference architectures

# Microclimate – Get started

## Via home page

<https://microclimate-dev2ops.github.io/gettingstarted>

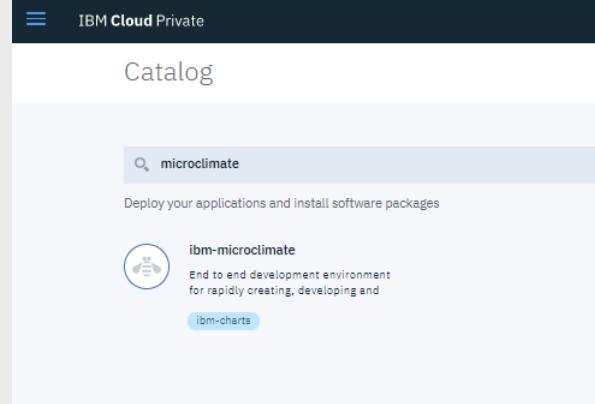


## Freely Available

1. Download from Microclimate home page to run locally (ILAN license)
2. Install into IBM Cloud Private from the ICP Catalog (supported with ICP license)

Use with IBM Cloud Private Community Edition

## Via IBM Cloud Private Catalog



# Why Microclimate? It's a differentiating experience

Polyglot language support

Built in browser based IDE or bring your own editor

Fast inner loop capability

End to end development via containers

Automated build and deployment

Code intelligence in real time

# Resources

# Resources

## Home Page

- Microclimate overview
- Introductory videos
- Documentation

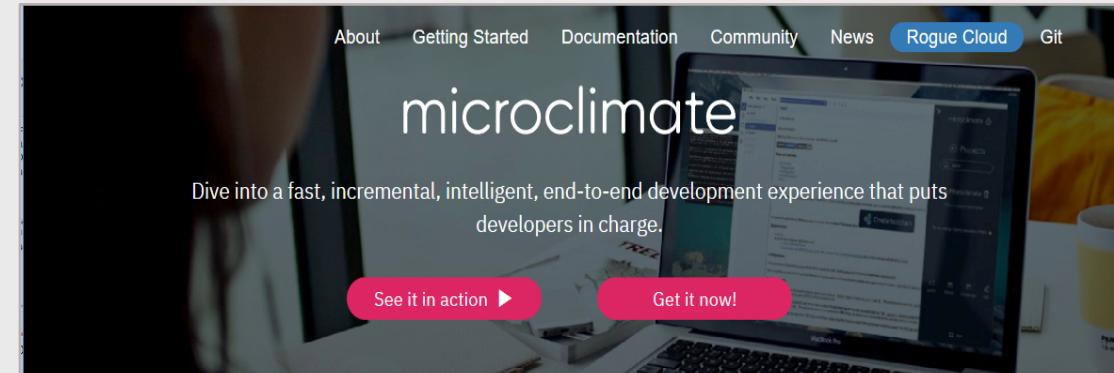
<http://ibm.biz/dev2ops>

## Rogue Cloud Game

- Rogue Cloud overview
- Introduces Microclimate through a game experience
- Documentation



[External Slack Channel](#)



The landing page for Microclimate features a dark background image of a developer at a desk. At the top, there's a navigation bar with links: About, Getting Started, Documentation, Community, News, Rogue Cloud (which is highlighted in blue), and Git. Below the navigation, the word "microclimate" is written in large white letters. A subtitle reads: "Dive into a fast, incremental, intelligent, end-to-end development experience that puts developers in charge." Two pink call-to-action buttons are present: "See it in action ▶" and "Get it now!".

**Microclimate** is an end to end development environment that lets you rapidly create, edit, and deploy applications. Applications are run in **containers** from day one and can be delivered into production on **Kubernetes** through an automated DevOps pipeline using **Jenkins**. Microclimate can be installed locally or on **IBM Cloud Private**.



How sharp are your coding skills? Do you consider yourself a master strategist? Are you willing to bet your character's life on it? Welcome to Rogue Cloud, our homage to the old school **roguelike** games. We spared you the monochrome graphics, but kept to tradition by creating an open-world, turn based world crawler complete with a top-down 2D multiplayer experience. However unlike a traditional game, where you get the luxury of a controller, keyboard, or mouse, with Rogue Cloud, you are writing code to ensure your character's success...and survival, in a dangerous world.

