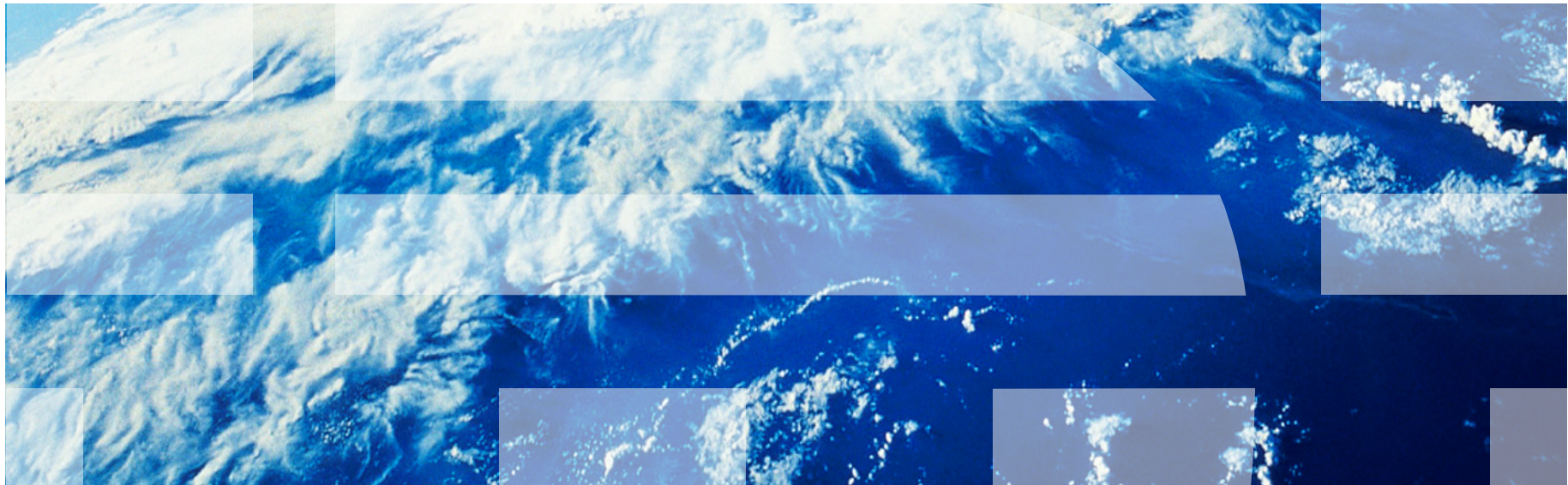

Developing Cloud Applications using IBM Bluemix

Brian DePradine (Development lead Liberty buildpack)



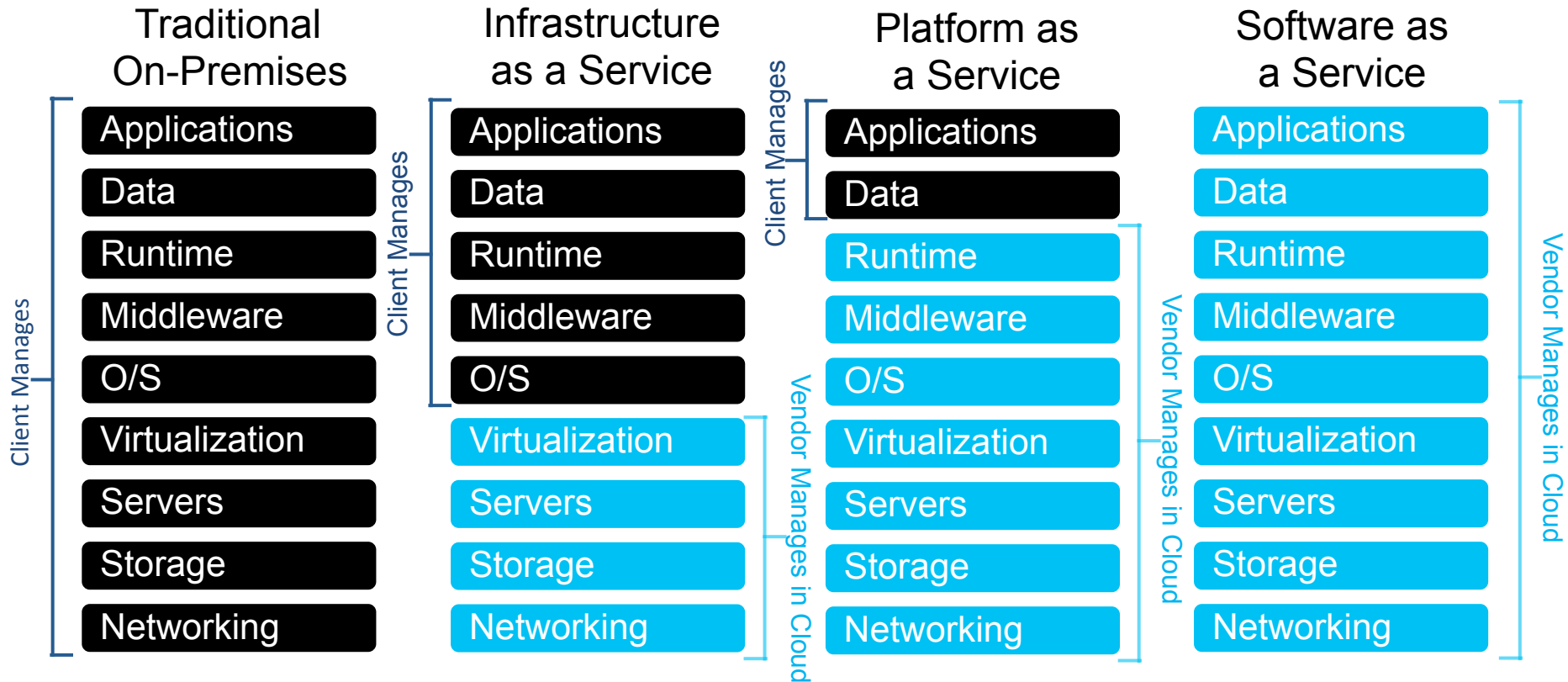
Their IT Needs

- Quick development time
- Low Cost
- Low barriers to ramp up & maintain (SW & HW purchases, updates, maintenance)
- Scalability

Their IT Challenges

- Slow development time
- Expensive
- Slow to provision internal cloud infrastructure
- Cumbersome bureaucracies bottleneck the process
- Non-scalable
- IT drives requirements

Cloud Service Models



Customization; higher cost; slower time to value

Standardization; lower cost; faster time to value

On-Premises

IaaS

PaaS

*Total Control
Maximum Flexibility
Maximum Security*

*Public Cloud
Economies
Time to Market*

*Shared Everything Economics
Packaged Services*

Build Your Own Cloud

Use virtualized WebSphere App Server on your hardware



IaaS - SoftLayer

BYOS&L - WebSphere App Server



PaaS - Blue Mix

Composable services
WebSphere Liberty Profile



Pure Application Systems

Build reusable & redeployable patterns using the WebSphere App Server



IaaS - Amazon

BYOS&L - WebSphere App Server



PaaS - Cloud Foundry

WebSphere Liberty Build Packs



BlueMix is IBM's PaaS (Platform as a Service) offering

A cloud-based platform for rapidly building, managing and running applications of all types (web, mobile, big data, social, ...).

Allows developers to use capabilities (services) from IBM or ecosystem partners in a pay-as-you-go model in the cloud.

- Running on IBM SoftLayer infrastructure (IaaS)
- Based on open-standards (OpenStack, CloudFoundry)

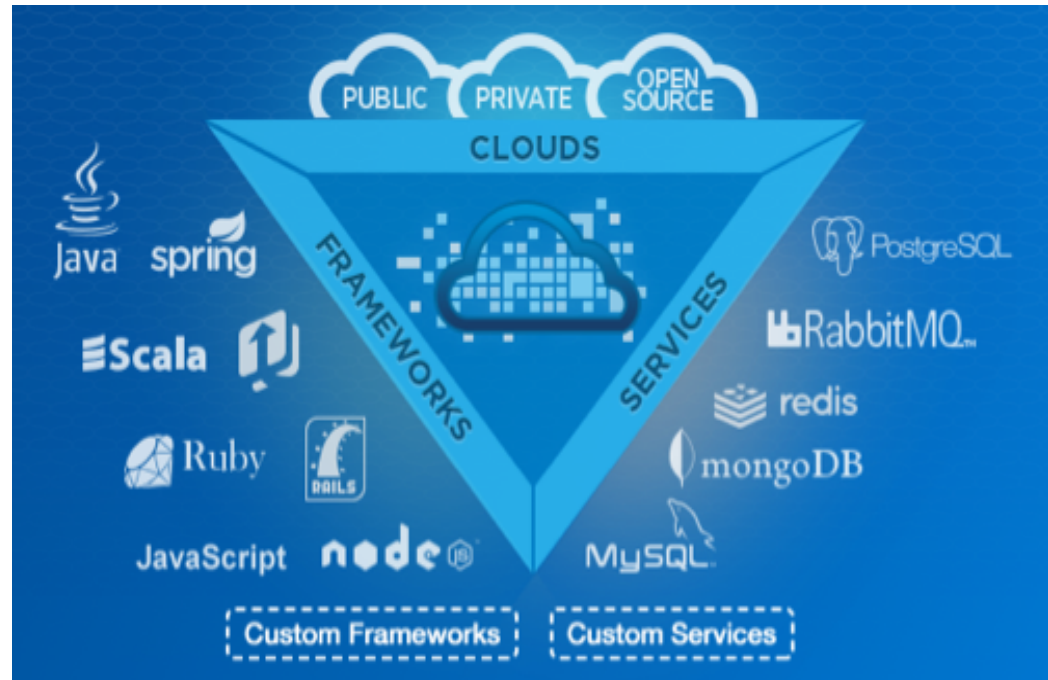


Embracing Cloud Foundry



Continuing our history of embracing and extending Open Source

TOTAL CONTRIBUTORS	
1,118	<u>Average per month</u> 2013 average: 133 12mo average: 98 Lifetime average: 58
LINES OF CODE	
646k	
PULL REQUESTS	PUBLIC REPOSITORIES
1025+	133+

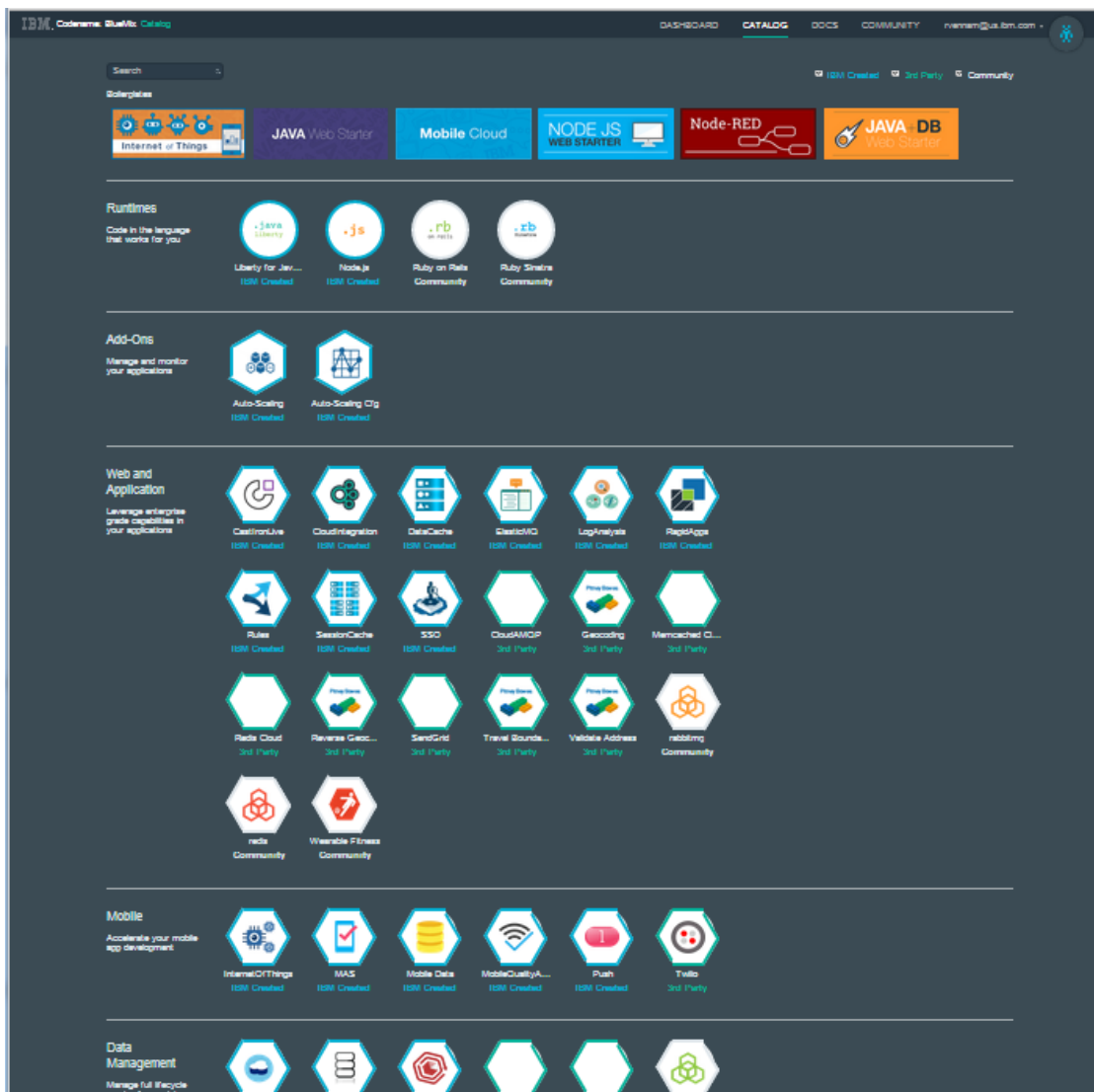




<http://cloudfoundry.org/index.html>

The Cloud Foundry Foundation





Run Your Apps

The developer can choose any language runtime or bring their own. Just upload your code and go.

DevOps

Development, monitoring, deployment and logging tools allow the developer to run the entire application

APIs and Services

A catalog of open source, IBM and third party APIs services allow a developer to stitch together an application in minutes.

Cloud Integration

Build hybrid environments. Connect to on-premises systems of record plus other public and private clouds. Expose your own APIs to your developers.

Built on IBM SoftLayer

Runs automatically on top of IBM's leading infrastructure as a service. No need to worry about provisioning or managing infrastructure.

Systems Of Record

- Traditional focus of Internal IT
- Also known as “commoditized” IT – highly structured, transactional systems
- Apps and DBs that store business records and automate standardized processes
- Inflexible but reliable
- Further investment provides diminishing returns
- Examples: CRM app, HR database, etc

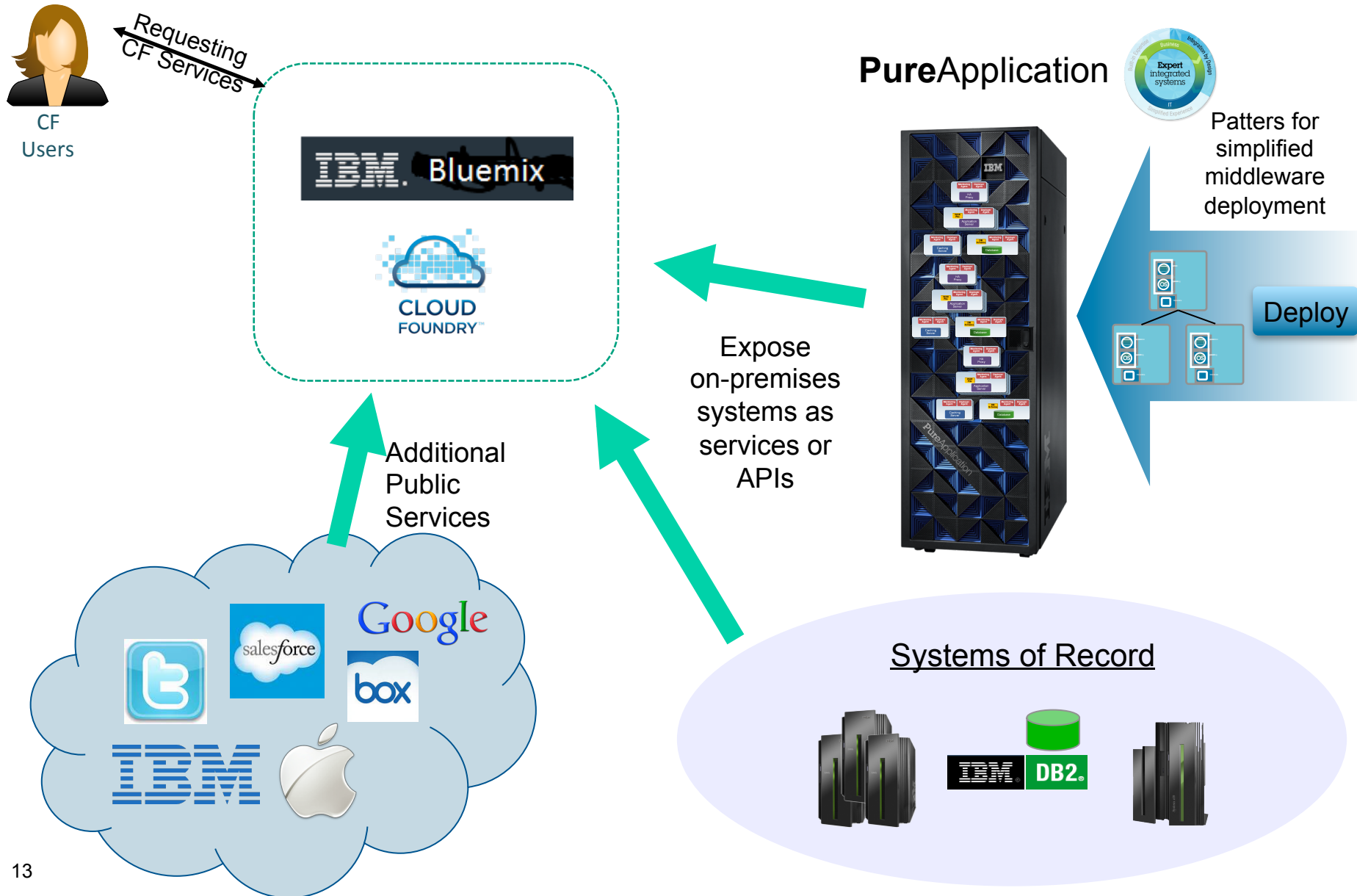
Systems Of Engagement

- Complement and unite Systems of Record
- Typically add context to an SoR via social and mobile components
- Adaptable to changing requirements
- Offer an engaging user experience
- Development process is usually agile and iterative with a quick time to value

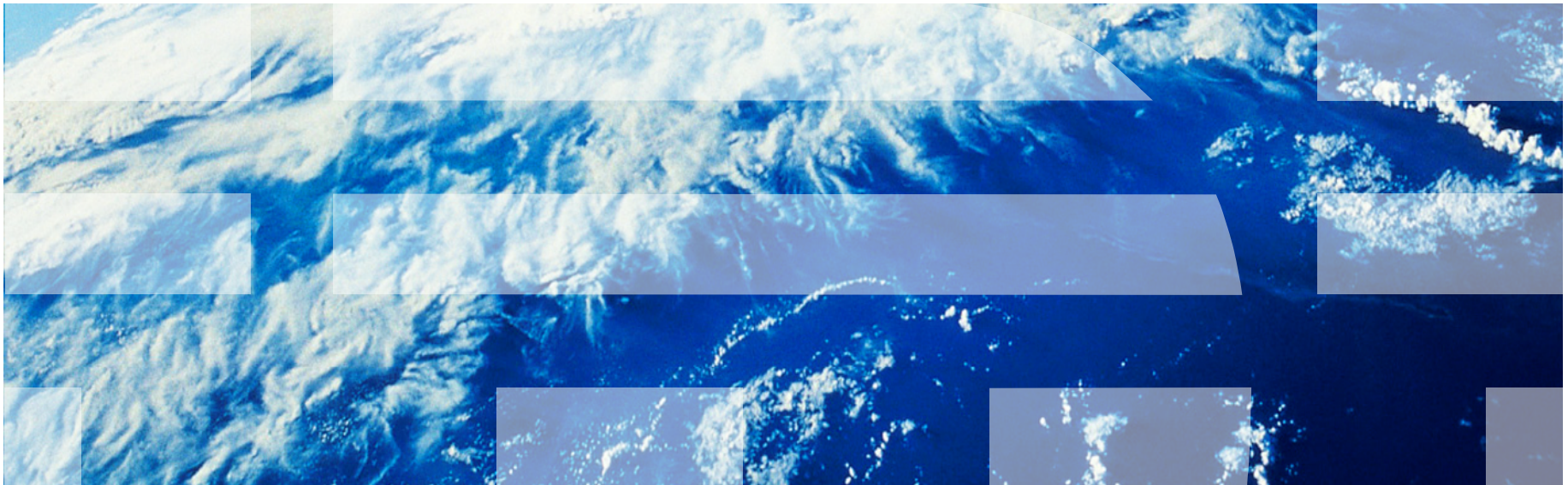
- SoE development is enabled by the cloud due to:
 - “Plug and play” nature of cloud services
 - Scalability
 - Quick, easy deployment process
- Requires a new way of thinking about development
 - Twelve Factor Applications
 - DevOps

- One codebase tracked in revision control, many deploys
- Explicitly declare and isolate dependencies
- Store config in the environment
- Treat backing services as attached resources
- Strictly separate build and run stages
- Execute the app as one or more stateless processes
- Export services via port binding
- Scale out via the process model
- Maximize robustness with fast startup and graceful shutdown
- Keep development, staging, and production as similar as possible
- Treat logs as event streams
- Run admin/management tasks as one-off processes

BlueMix Extends and Builds-on Systems of Record, Pure, and SaaS

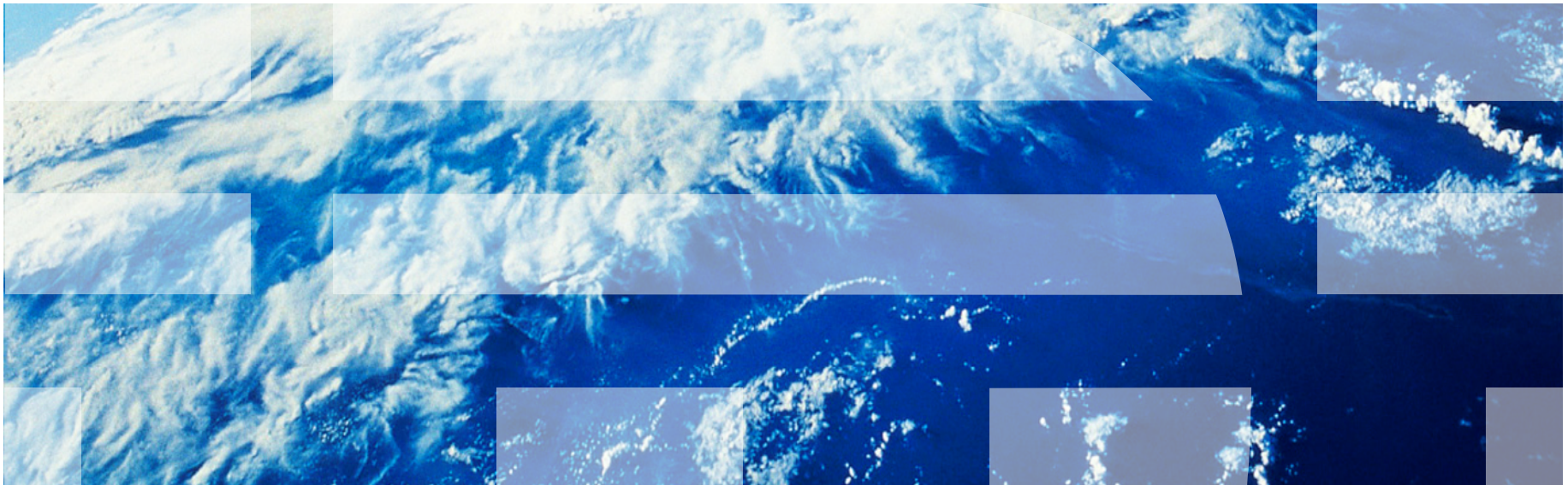


Demo



- IBM Redbook (8 pages): [BlueMix Redbook](#)
- Videos on YouTube: [IBM Bluemix on YouTube](#)
- Excellent overview and quick how-tos's: [Bluemix brings PaaS to the party](#)
- Bluemix Documentation: www.ng.bluemix.net/docs
- Bluemix Blog: developer.ibm.com/bluemix/blog
- Bluemix related code on GitHub: [Bluemix projects](#)
- Register and try it for yourself: www.bluemix.net

End



Business Model and Pricing Summary



FREE TRIAL	PAY AS YOU GO	SUBSCRIPTION	ELA	SUPPORT
<ul style="list-style-type: none"> • 30 day trial • No credit card required • Unlimited access to all services and Support (for now) 	<ul style="list-style-type: none"> • Flexible, cancel anytime • Consumption based price metrics (compute, data, mobile, security) • Competitive to market • No cannibalization to on-premise • Easy for customer to understand • Free tier available 	<ul style="list-style-type: none"> • 6/12/36 months • Up to 35% savings vs. Pay-As-You-Go plan • Minimum spend \$500/month • Flexible billing • Free tier available 	<ul style="list-style-type: none"> • Utilize investment bucket or CBA • Opportunity to renegotiate ELA with Bluemix as vehicle 	<ul style="list-style-type: none"> • Two support options • Community free Support • Paid support - 24x7 phone, email, chat • 10% of list, \$200/month minimum