

# Enabling The Dynamic Data Center with BIG-IP v10 &ndash; Part 4



Alan Murphy, 2009-08-05

*Note: F5 BIG-IP v10 launched earlier this month with 120+ features focused on the IT Agility and the Dynamic Data Center. This is the conclusion of a multi-part series on matching the needs of IT with the needs of business through IT Agility.*

## IT agility. Your way.

This “Data Center as a Service Mecca” won’t happen overnight and it won’t happen in isolation; that movement will need to incorporate fundamental data center changes to enable IT agility, to meet the changing needs of the business. There are four discrete functional changes that need to occur in any existing data center to begin bridging the gap to the dynamic data center: unification, visibility, context, and decision.

- **Unification:** Strategic technologies overlap in the data center and are brought together and managed as one unit. Open standards and APIs are in place for easy integration with new and existing technologies.
- **Visibility:** All application services in the data center become transparent; application data is managed bi-directionally in and out of the data center. Communication with off-board services, such as the cloud, originates and is controlled from inside the data center as part of a local, logical unit. Reporting and management data is gathered and managed in one central location.
- **Context:** Application and user data is managed and controlled as a single unit. Application access is dictated by the user environment for each unique data request. Reporting and management data is evaluated after every application response. Resource availability is paramount to evaluating user, application, network, and service contextual requests.
- **Action:** Resource unification, visibility, and context are brought together at every step in the application and data-deliver stack to move application data in and out of the data center in the best possible manner for that instance.



Each one of the migratory steps is required, in sequence, to propel the static data center of today into the dynamic data center of tomorrow. First, Unification (or Integration) across all disparate parts of the data center enables each of the units to move out of their silos into working together as an ecosystem service. Visibility gives insight into how each of these now unified parts of the data center work together to deliver a service. Then Context provides the ability to make decision based on current circumstances and the status of each service within the data center, which is based on visibility data that’s been collected from each unified component. And finally there’s Action—acting on decisions spawned from context. Every service-enabled action in the data center will need to be driven by context, visibility, and unification.

As these four ideas are implemented throughout IT, the data center will begin to change from the traditional model of yesterday to tomorrow’s dynamic model. The data center will begin to move from isolated to shared, from network-centric to application-centric, and from a physical system focus to a services-driven architecture.

**F5 BIG-IP v10: Enabling the Dynamic Data Center and IT Agility**

Organizations, from the CIO down, are able to take advantage of this new service agility model to align IT with the goals of the business. By focusing on the data center—the core component to IT and business technology and application needs—businesses can better align their financial goals with technology goals. In the traditional model it was very difficult to create an agile environment where all of the services in a data center could be mobile and fluid and move with business need. With the new computing models introduced into the data center over the last three years, businesses can finally make this vision a reality by bridging the old with the new, the business goals with the technology needs, truly creating “IT agility. Your way.” New applications can be provisioned in a matter of hours rather than days, weeks, or months. Services can be moved between physical and virtual data centers, in and out of the cloud, as needed. Networks can be dynamically reconfigured as new applications are rolled out to customers. Disaster recovery can move from a one-to-one physical/secondary data center model to a one-to-many redundant “pay as you need” model. And most importantly, data centers are no longer relegated to physical buildings with walls; today, data centers can exist as virtual components built around applications.

The data center of tomorrow is no longer a vision on paper, or a futuristic “pie in the sky” idea. Due to rapid advancements in IT technologies such as virtualization, system management, and cloud computing, the data center of tomorrow has arrived today. This is a movement that addresses the needs of today’s CIO and finally brings the data center out of the annals of IT to the front of the business’

bottom line. The data center of today is built on services and applications rather than servers and networks. We now have the technology to define, design, develop, deploy, and manage the entire data center as a service. The data center of today is poised to deliver unified application and data delivery services in a way IT has never before witnessed.

For more information on how [F5 BIG-IP v10](#) can power your dynamic data center with IT Agility, visit [F5’s site](#) or the litany of excellent [DevCentral content](#) available right here.

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F5 Networks, Inc. | 401 Elliot Avenue West, Seattle, WA 98119 | 888-882-4447 | [f5.com](#)

F5 Networks, Inc.  
Corporate Headquarters  
[info@f5.com](mailto:info@f5.com)

F5 Networks  
Asia-Pacific  
[apacinfo@f5.com](mailto:apacinfo@f5.com)

F5 Networks Ltd.  
Europe/Middle-East/Africa  
[emeainfo@f5.com](mailto:emeainfo@f5.com)

F5 Networks  
Japan K.K.  
[f5j-info@f5.com](mailto:f5j-info@f5.com)