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Instant Data Gratification:

3 Capabilities Organizations Need Now

Contents

Introduction

Examining the viewing habits of 6.7 million Internet users, people couldn't wait more than two seconds for a video to load, found researcher Ramesh Sitaraman, a computer science professor at UMass Amherst. Sitaraman said that "After [two seconds] they started abandoning. After five seconds, the abandonment rate is 25 percent. When you get to 10 seconds, half are gone." Sitaraman believes that the results offer a glimpse into the future. As Internet speeds increase, people will be even less willing to wait.[1]

People couldn't wait more than two seconds for a video to load

Web and mobile application technology has given rise to a new breed of customer – the constantly connected consumer, who is by definition better connected, more aware and technologically savvy. Businesses that are more astute will already have strategies in place to reach these customers. Others are still playing catch up and quickly realizing that there is no "one size fits all" solution.

Even though there is no "one size fits all" solution, the need to deliver consumers instant gratification – immediate satisfaction and the quick attainability of happiness or of contentment when we get what we want instantaneously – is the same across the board.

Instant gratification has morphed and evolved into what we call 'instant data gratification'.

But instant gratification has morphed and evolved into what we call 'instant data gratification'. Whether in the workplace or as a consumer, we demand instant data results. Smart phone apps eliminate the wait for a cab or a table at a restaurant. Movies and TV shows begin streaming in seconds. eGaming bets are placed and trades are made regardless of location and Internet connectivity. So while there are things in life worth waiting for, data is not one. Data that you can action, immediately, is transforming our lives and how we interact with organizations.

The New and Fast Web and Mobile Application

This concept of instant data gratification lends itself to the new web and mobile application. Jeffrey Hammond at Forrester wrote in an article[2] that:

"Your business will need to predict what your customers want when they launch a mobile application or website. Delta Airlines, for example, knows how close a passenger is to departure time and delivers relevant content, such as a frequent flier's real-time status on the upgrade list for her next flight. Today, that kind of context is uncommon. Tomorrow, it will be table stakes…Application developers writing mobile apps will have to start thinking about "mobile context" -- which we define as everything your customer has told you and all you can understand about what the customer is currently experiencing. Context is just one of the big, new challenges that application developers will face."

So, while trying to quickly launch new web and mobile applications to stay competitive, coping with mobile operating systems, device proliferation and now context (and big data), organizations also face the complexity and associated challenges of instantly delivering services to customers. To handle all of these challenges to remain competitive, data distribution becomes essential. If data cannot be distributed efficiently and quickly then meeting instant data gratification expectations and delivering mobile context/personalization becomes impossible.

[1]Boston.com, "The growing culture of impatience makes us crave more and more instant gratification" http://goo.gl/TyZPRt
[2]Information Week, "9 Challenges To Your Mobile App Strategy" http://goo.gl/9gGMtA

3 Data Distribution Capabilities Organizations Need

There are three data distribution capabilities developers need to launch successful web and mobile applications including:

Developers need to create high performing web and mobile applications which includes the ability to reliably handle high volumes of data and connections while keeping latency to the bare minimum with no impact on the end-user experience.

1. Speed and Performance – Speed and performance is of the essence in engaging users and making money so enabling data to move in real-time on the Internet, regardless of network conditions and end devices, is an important part of the development process. This needs to be easily incorporated into web and mobile application so that instant data gratification can be delivered. As mentioned earlier, if an application has more than a two-second delay, your impatient customers will most likely move on. Developers need to create high performing web and mobile applications which includes the ability to reliably handle high volumes of data and connections while keeping latency to the bare minimum with no impact on the end-user experience.

2. Efficiency – Today's applications delivered over the Internet are sourcing and distributing huge amounts of data from multiple locations: data center, cloud, third-party, etc. While the customer or employee looking at a browser window or mobile device sees a single application delivering relevant data, the quality of data and how it is distributed to the application affects the overall experience.

Organizations collaborating online, reaching and engaging with customers and employees across mobile and web applications or using big data and analytics, need efficient ways to distribute this data. The problem, for many organizations however, is that they don't address the root cause of their problem and instead turn to inefficient ways of distributing this data – adding more hardware infrastructure, higher bandwidth and network utilization – and all of this, significantly increases data distribution costs.

What is required is a way to efficiently distribute data to employees, machines and customers through web and mobile applications without affecting your organization's application performance. This includes the ability to distribute data intelligently, understand how infrastructure impacts application performance and distribute data in real-time to improve the mobile and web application experience.

3. Scalability – Organizations must have the toolset to develop web and mobile applications that can scale quickly and scale to meet large numbers of concurrent users. But for many organizations, the solution tends to be focused on the infrastructure usage versus how data can be distributed more intelligently so that their web and mobile applications can elastically scale up and down while delivering a high quality user experience. And because performance means nothing without the ability to meet the demands of millions of end users, scalability is a key part of developing complex web and mobile applications.

Furthermore, scaling to support millions of connections (regardless of device type) is a challenge that every organization needs to address, particularly if your web or mobile service goes viral. You need to ensure that the web and mobile app is architected in a way so it can handle a flash crowd, a phenomenon where a network or host suddenly receives a lot of traffic.

Lack of scale can have a huge impact on a business from loss of customers through to negative impact on your brand reputation.

Removing the Complexity of Developing Web and Mobile Applications

For many organizations as they quickly develop more web and mobile applications to work across all of the different end-user applications on smartphones, tablets, TVs, M2M SIMS, the complexity to develop for speed, performance, efficiency and scalability becomes a problem. A problem developers face each and every time a web and mobile application is developed; but it needn't be.

Push Technology's Diffusion™, is the ingredient required to resolve the limitations of meeting instant data gratification by speeding up the delivery of content, enabling rapid scale and performance and efficiently optimizing data sent and received. With Diffusion, organizations can spend more time on developing for competitive differentiation because the hard part of delivering data is solved. Developers can then focus on differentiation and innovation whereas the business can focus on identifying new revenue opportunities. Diffusion offers:

Push Technology's Diffusion™, is the ingredient required to resolve the limitations of meeting instant data gratification by speeding up the delivery of content, enabling rapid scale and performance and efficiently optimizing data sent and received.

Speed	Near- zero latency through its high performance engine
Scale	Allows high throughput and scalability on commodity hardware
Intelligence	Adaptive to bandwidth, device, network, geography
Optimize	Low bandwidth requirement due to protocol efficiency
Interactive	Real time 'Bi-directional' interactions
Any Device	Streaming support for all Desktop, Mobile and Web Apps

Using Diffusion to Deliver Your Essential Data Distribution Capabilities

The three data distribution capabilities developers need to launch successful web and mobile applications can be solved with Diffusion. Because Diffusion efficiently distributes data at speed and scale, organizations will be able to increase revenue opportunities, reduce expenditure and improve the end user experience. Business benefits in detail include:

Increased Revenue Opportunities

– Speed improves web and mobile application responsiveness helping organizations increase customer retention. Faster apps mean that transactions, bets or second screen advertising opportunities are not missed.

– By efficiently distributing data, you can decrease the amount of bandwidth consumed allowing more services to be offered on the same infrastructure.

– The ability to rapidly scale enables more end users and markets to be reached all while controlling infrastructure usage.

– Simplified data distribution development enables faster time to market for new apps and services.

Reduced Expenditure

- Decreasing the amount of bandwidth consumed when distributing data amounts to less spent on expensive data centre bandwidth charges.
- High scalability results in less server instances required to support huge numbers of end users.
- Rapid scalability together with cloud-based on demand infrastructure also enables organizations to only pay for peak events when they occur instead of having idle infrastructure most of the time.
- Easy to use software APIs results in developers requiring less time to develop applications and get them to market.

Improved Application Experience

- Creating event-driven web and mobile applications ensures the most up to date data is always available to the end user.
- Optimizing data delivery to applications reduces mobile data charges for the end user helping to improve the experience and encourage repeat usage.
- Rapid scalability ensures that as more users access the application, it will have no impact on the experience.
- With reduced infrastructure and bandwidth, more services can be delivered to the end user.
- Easy to use software APIs allows developers to focus their efforts on creating the best app experience for the end user.

Meeting instant data gratification demands can help you to increase revenue opportunities, reduce expenditure and improve the end user experience.
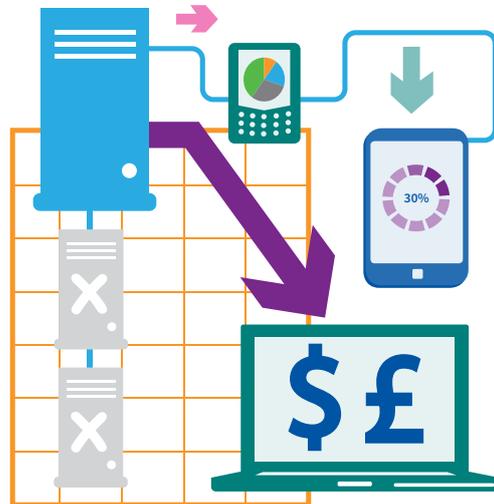
6. Conclusion

When developing your web and mobile application, consider how you will immediately meet your customers' needs so you are meeting instant data gratification demands. If you cannot easily incorporate speed, performance, efficiency and scalability, then meeting your customers' expectations will be a battle. Diffusion is the ingredient technology necessary to deliver the three data distribution capabilities every organization needs.

How will you meet instant data gratification demands?

About Push Technology

We make the Internet work for our mobile-obsessed, everything-connected world. Leading brands like 888 Holdings, DAB Bank, IBM, and William Hill leverage our technology to power applications critical to revenue growth, customer engagement, and business operations. Learn how to deliver apps at scale and speed at **www.pushtechnology.com**

For further information
Visit **www.pushtechnology.com** or contact **sales@pushtechnology.com**

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