Top 5 Salesforce Performance Problems

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Salesforce is a heavyweight in the SaaS market, and Salesforce problems can affect thousands of users. Salesforce has an online status dashboard that many users leverage to monitor the application and determine whether it's working properly and performing to expectations. However, trust.salesforce.com is really just an internal dashboard Salesforce set up for checking on whether everything within the Salesforce infrastructure and data center is functioning properly. It doesn't really show what's happening on 90% of the Salesforce delivery path. Think of it as the "check engine light" of Salesforce: It tells you whether the engine (application code) is running fine, but it doesn't tell you the condition of the roads (the Internet connection), whether there's construction on the roads (limited bandwidth), or other cars tying up traffic (competition for resources). Just because the "engine" is running fine doesn't mean you'll be able to drive fast and get to your destination quickly.

Salesforce is a critical application that companies rely on to keep their business moving forward. Therefore, it's important for IT teams to be aware of and watch for the performance issues that could arise or already be occurring, and to know how to respond and correct the issues before they impact company operations and ultimately affect the business. Many of the issues highlighted here are not specific to Salesforce. They are just the successful SaaS service example observed within our customer base, and the ecosystem of plugins is substantially larger than other SaaS providers.

The Top Salesforce Problems

Here are what we consider to be the top five performance problems for enterprise SaaS services like Salesforce:

1. **Location-specific issues**. Salesforce runs out of 27 instances globally, with 21 of them in North America. The location of your office in relation to the location of your instance of Salesforce and all your Salesforce plug-ins is a factor with understanding the performance of your Salesforce application. It's actually central to many of the performance issues Salesforce users see. Diminishing the physical distance and the number of network hops to get to Salesforce can have a huge impact on performance. This may not seem like a big deal; no one is going to notice a 20 or 30 milliseconds delay. When those 20 or 30 milliseconds are tacked on to each of the 75 objects on a Salesforce web page, and users are spending several hours in this mission critical SaaS app, they really add up.
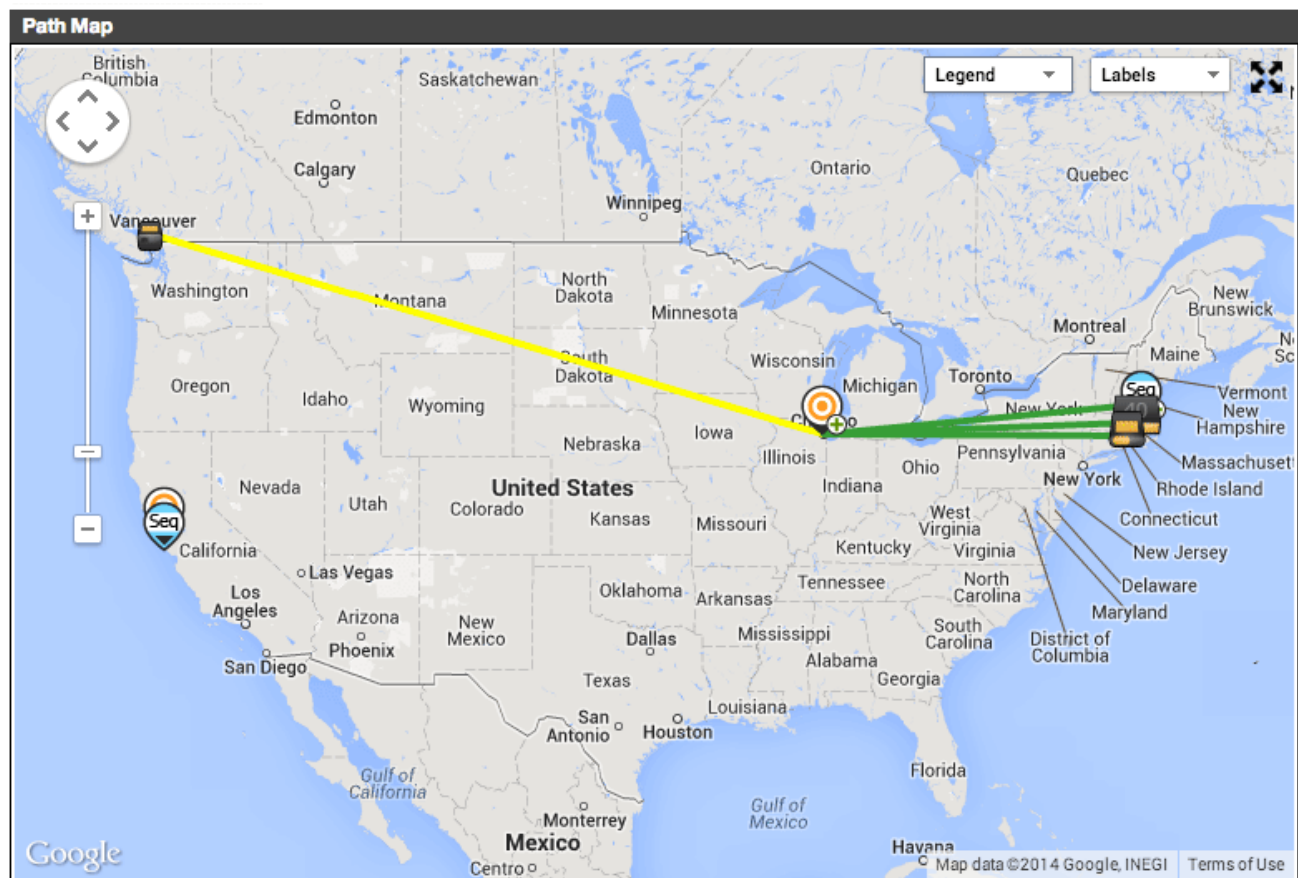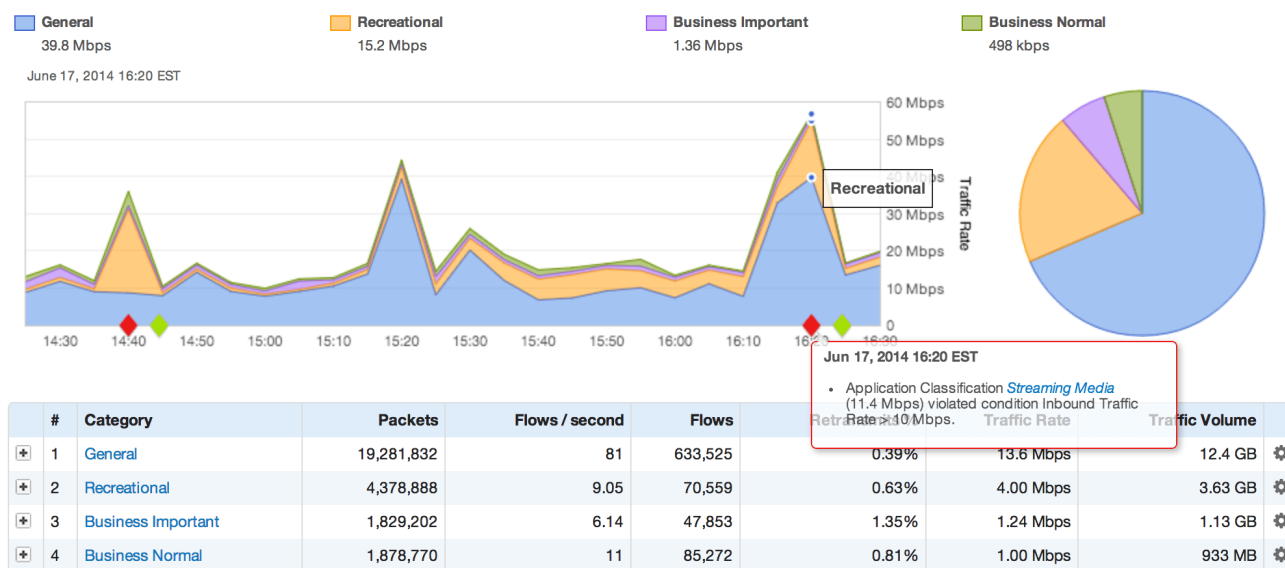

Most other SaaS services do not have the option to choose where your account is provisioned. You should take advantage of this option with Salesforce and choose the instance closest geographically to your users as this will give the best performance.

2. **Underestimating the impact of recreational traffic**. Every employee now carries around one or more devices capable of streaming high-definition video and audio, most of which will automatically connect to the company wireless network. With people bringing their mobile devices to work and using the local wireless network to stream media, you can find your bandwidth capacity being strained or consumed, leaving critical applications such as Salesforce starving for resources. We have followed our own best practice and set up a separate wireless network for personal devices, so there is plenty of bandwidth available for Salesforce. One way to mitigate this is to set up a separate, guest wireless network for all the tablets, smartphones and other mobile devices your workforce is using and prevent them from going on the regular internal network through the use of MAC address filtering. That way, you can dedicate bandwidth to each network separately, allowing you to control how much capacity is available to different devices.

Top Categories
• BOSTON, US - RA01-US-MA - TT •
June 17, 2014 14:28 to 16:30

General	Recreational	Business Important	Business Normal
39.8 Mbps	15.2 Mbps	1.36 Mbps	498 kbps

June 17, 2014 16:20 EST

Jun 17, 2014 16:20 EST
• Application Classification *Streaming Media* (11.4 Mbps) violated condition Inbound Traffic Rate > 10 Mbps.

#	Category	Packets	Flows / second	Flows	Retransmit %	Traffic Rate	Traffic Volume	
1	General	19,281,832	81	633,525	0.39%	13.6 Mbps	12.4 GB	⚙
2	Recreational	4,378,888	9.05	70,559	0.63%	4.00 Mbps	3.63 GB	⚙
3	Business Important	1,829,202	6.14	47,853	1.35%	1.24 Mbps	1.13 GB	⚙
4	Business Normal	1,878,770	11	85,272	0.81%	1.00 Mbps	933 MB	⚙

3. **Low-quality bandwidth**. When a web or SaaS application such as Salesforce is slow, many companies think they should just invest in more bandwidth. This is a real problem, but before upgrading their office bandwidth, they should look into whether that is what is actually holding back their Salesforce performance. For example, in our offices here in Boston we are getting 100Mbps of bandwidth, and the Salesforce instances have extremely high bandwidth connectivity, but our connection to Salesforce is running at 7Mbps.

HTTP Throughput
7.57 Mbps

Total Capacity
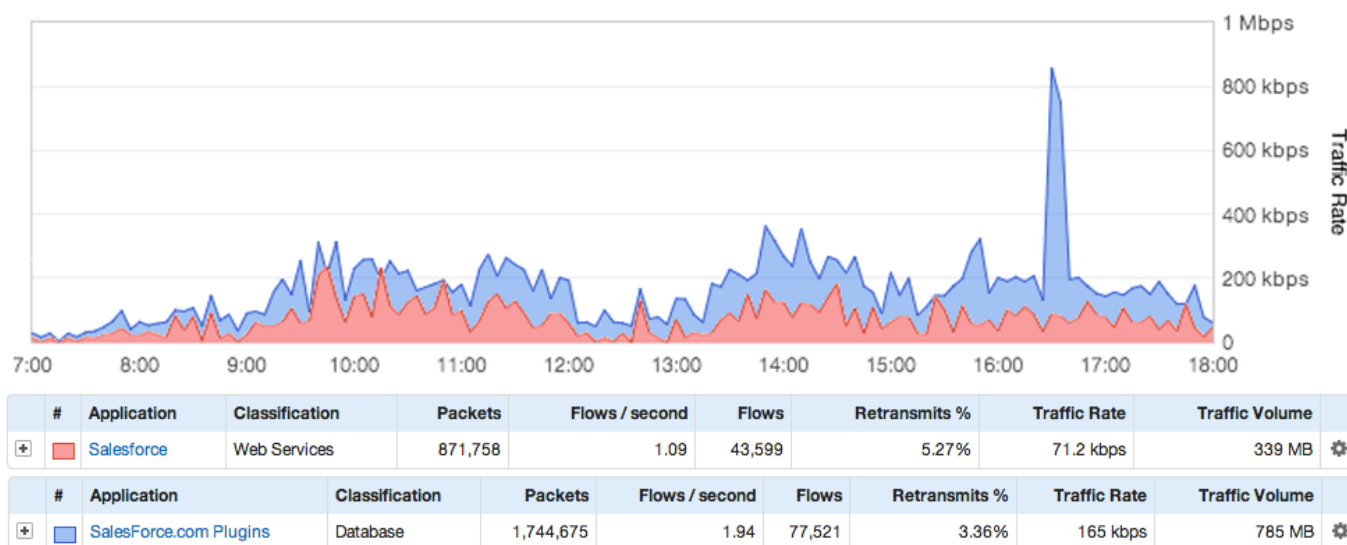84.32 Mbps

June 30 2014, 14:49
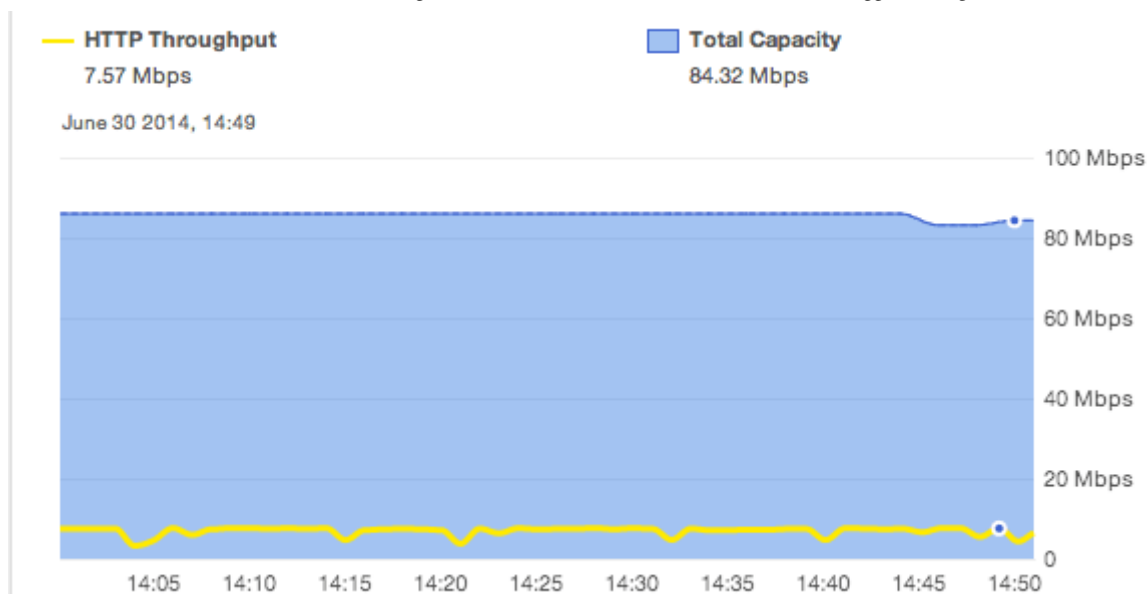
For most of the companies we work with, getting more bandwidth isn't going to make Salesforce faster or perform better. What will make it perform better is getting higher quality bandwidth. Web applications are TCP-based with guaranteed delivery, and small amounts of packet loss will have an incredible impact on web application performance. When a web application has 3 to 5% of packet loss, also represented by the retransmit rate in flow-based applications, the overall user experience of that application will be terrible. The solution is to make sure you're not experiencing packet loss and retransmits on your current Internet connections and to ensure your and your ISP's network equipment is working properly. The reason many companies upgrade from residential to business class or other dedicated circuits is to ensure tighter tolerances, better equipment, and less of a chance of packet loss for their web apps.

4. **Intelligent caching**. Web applications such as Salesforce have lots of Javascript and Cascading Style Sheets in order to provide a rich user experience that is comparable to what people experience with a desktop application. As a result, you're going to have 3, 4 or 5MB javascript files that can take time to download, especially when you have packet loss. This one specific page with multiple plugins used by our Sales team has a total page size of 5 MB. Since it rarely changes, if you can enable caching on your network and create a cache derivative of it stored locally, you'll be enabling larger file downloads and creating a much better experience for your users when loading Salesforce.

5. **Plugin usage**. The average Salesforce customer has seven plugins within Salesforce, each of which can dramatically help or hurt the overall end-user experience of Salesforce. The majority of your total data transfer could actually be from these third-party plugins, which work with Salesforce to provide lead sourcing, marketing, sales

and accounting capabilities. Therefore, you want to explore how much bandwidth your plugins are using, and from where these plugins are being served. The performance impact of these plugins should be a consideration when choosing between the available plugins, not just the features they have available. To gauge the full performance impact of these plugins, you need a tool that measures the full end-user experience with a real synthetic transaction, as that will allow you to see whether not only Salesforce is working properly but how your plugins are working as well.

#	Application	Classification	Packets	Flows / second	Flows	Retransmits %	Traffic Rate	Traffic Volume	
⊞	Salesforce	Web Services	871,758	1.09	43,599	5.27%	71.2 kbps	339 MB	⚙

#	Application	Classification	Packets	Flows / second	Flows	Retransmits %	Traffic Rate	Traffic Volume	
⊞	SalesForce.com Plugins	Database	1,744,675	1.94	77,521	3.36%	165 kbps	785 MB	⚙

These are the fundamental areas that you and your IT team can monitor to locate, avoid and resolve Salesforce performance issues. Even if you're getting everything right with respect to how you're running Salesforce, you need to make sure the entire underlying infrastructure is capable of delivering a quality Salesforce experience. At AppNeta, we spend a lot of time making sure our tools for monitoring SaaS apps like Salesforce pick up these issues before they impact the users' experience.

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