

07/28/18 Success Story: 2 months to find root-cause of slow logins that customer spent 1.5 year investigating.

Issue: Customer had been investigating, for over a year, the reason why CRM users based out of Korea, were, occasionally (yet often and bad enough to be an executive-visible issue) experiencing slow performance when logging on to their CRM.

Benefit summary: Within 2 weeks, germain APM helped that customer to identify that 60% of the slow logins were caused by old desktops (and more precisely, slow disk, slow processor and slow architecture causing transactions to be queued up, in many areas of the desktop's motherboard and disk). Within another 2 weeks (we had to enable further capabilities for that) customer found out that another 20% of slow logins were caused by Site Minder technology and finally, the remaining 20% was caused by slowly loading Static Contents (js, css, html), static content that were taking longer than normal to upload on the user desktops and caused by occasional slow network latency.

Implementation: Initially, when we started investigating this issue with the customer, they were very hesitant going back through the hassle of deploying agent on their users' desktops again, but in our view, there weren't any other alternatives to troubleshooting this issue.

Note that, it took the customer a few weeks to get the proper authorization for germain APM agent to be deployed on users' desktops, then once these agents were deployed, it took a few days to get agents deployed and installed, and we had to do a little troubleshooting and tuning (as it had been a while since we had last used that technologies for old desktops like these. Then we had to extend our monitoring to the Static Content load time. Further troubleshooting/time breakdown of Site Minder layer is the only piece pending, awaiting for our customer get the authorization to deploy our Agent in it).

Important to note that the customer had deployed other monitoring tools, before deploying germain APM, and had found nothing either because these other tools were

only collecting aggregated/averaged data and hiding the actual issues, or because these tools weren't collecting or correlating the right statistics.

Also important to note, that we had to improve germain APM' user interface, to make the raw data (metrics..) more easily accessible to new users (as the first time the customer used germain APM they did not find these critical metrics/root-cause analysis..)

Here are some screenshots of germain APM showing these various issues and root-cause:

High Memory consumption causing the server to swap memory

Computer Desktop > RCA : Memory Usage

Time Range 15 Minute(s)

Trend 06/25/2018 5:42:32 AM - 06/25/2018 5:57:32 AM

ID	Time	Category	Name	Value
	06/25/2018 5:43:02 AM	System:Memory Usage		93.170835 %
	06/25/2018 5:44:04 AM	System:Memory Usage		93.18471 %
	06/25/2018 5:45:03 AM	System:Memory Usage		93.705935 %
	06/25/2018 5:46:03 AM	System:Memory Usage		93.712922 %
	06/25/2018 5:47:03 AM	System:Memory Usage		93.671298 %
	06/25/2018 5:48:02 AM	System:Memory Usage		92.797801 %
	06/25/2018 5:49:03 AM	System:Memory Usage		93.790854 %
	06/25/2018 5:50:02 AM	System:Memory Usage		94.37112 %
	06/25/2018 5:51:02 AM	System:Memory Usage		93.867508 %
	06/25/2018 5:52:01 AM	System:Memory Usage		93.498311 %
	06/25/2018 5:53:02 AM	System:Memory Usage		93.815848 %



Overloaded disk placing I/O on wait

Time filter: 06/22/2018 12:00 AM - 06/30/2018 12:00 AM CEST Data Filter: no filters

Computer Desktop > Disk Queue Length

Maximum Results: 100 Showing Results: 100

RCA	System	Database	Application	Session	PID	TID	Timestamp	Value	Category	Name
		n/a	n/a	n/a	n/a	n/a	06/26/2018 1:22:17 AM	137	System.Disk Queue...	
		n/a	n/a	n/a	n/a	n/a	06/26/2018 9:46:41 AM	128	System.Disk Queue...	
		n/a	n/a	n/a	n/a	n/a	06/26/2018 9:51:35 AM	114	System.Disk Queue...	
		n/a	n/a	n/a	n/a	n/a	06/26/2018 1:50:45 AM	103	System.Disk Queue...	
		n/a	n/a	n/a	n/a	n/a	06/28/2018 2:00:37 AM	89	System.Disk Queue...	
		n/a	n/a	n/a	n/a	n/a	06/28/2018 4:00:38 AM	78	System.Disk Queue...	
		n/a	n/a	n/a	n/a	n/a	06/29/2018 1:26:02 AM	76	System.Disk Queue...	



Slow Disk on these users desktops:

Time filter: 05/29/2018 12:00 AM - 06/29/2018 12:00 AM CEST Data Filter: no filters

Computer Desktop > Disk Utilization

Maximum Results: 100 Showing Results: 100

RCA	System	Database	Application	Session	PID	TID	Timestamp	Value	Category	Name
		n/a	n/a	n/a	n/a	n/a	06/27/2018 2:19:17 AM	100 %	System.Disk Utilization	
		n/a	n/a	n/a	n/a	n/a	06/28/2018 12:35:33 AM	100 %	System.Disk Utilization	
		n/a	n/a	n/a	n/a	n/a	06/27/2018 11:40:40 AM	100 %	System.Disk Utilization	
		n/a	n/a	n/a	n/a	n/a	06/28/2018 12:57:33 AM	100 %	System.Disk Utilization	
		n/a	n/a	n/a	n/a	n/a	06/27/2018 12:29:20 PM	100 %	System.Disk Utilization	
		n/a	n/a	n/a	n/a	n/a	06/28/2018 12:53:33 AM	100 %	System.Disk Utilization	



Slow Processors:

Time filter: 06/22/2018 12:00 AM - 06/30/2018 12:00 AM CEST Data Filter: no filters

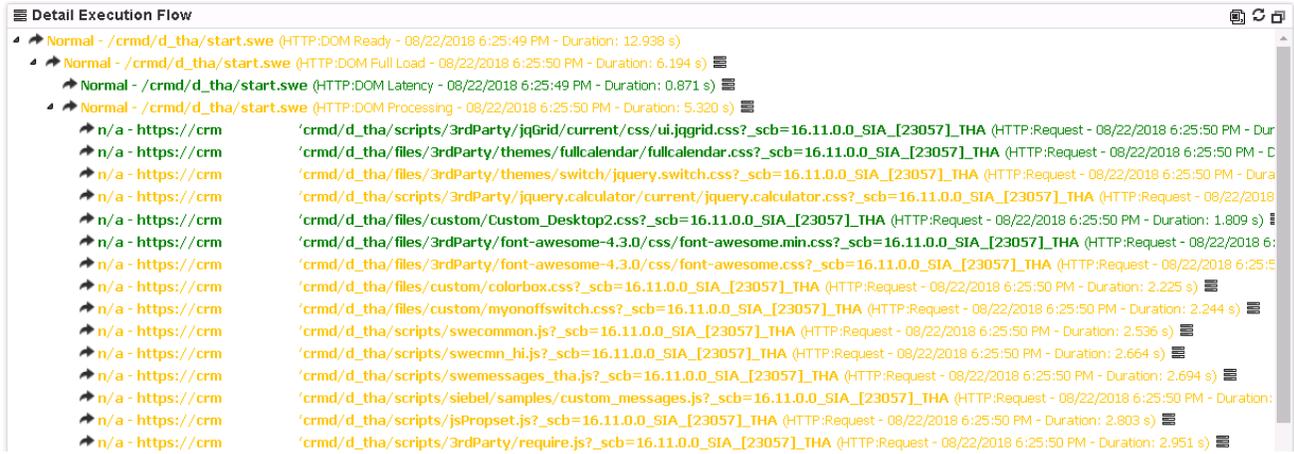
Computer Desktop > CPU Queue Length

Maximum Results: 100 Showing Results: 100

RCA	System	Database	Application	Session	PID	TID	Timestamp	Value	Category	Name
		n/a	n/a	n/a	n/a	n/a	06/25/2018 1:10:26 AM	32	System:CPU Queue ...	
		n/a	n/a	n/a	n/a	n/a	06/25/2018 5:23:07 AM	32	System:CPU Queue ...	
		n/a	n/a	n/a	n/a	n/a	06/26/2018 4:28:31 AM	26	System:CPU Queue ...	
		n/a	n/a	n/a	n/a	n/a	06/27/2018 1:18:00 AM	23	System:CPU Queue ...	
		n/a	n/a	n/a	n/a	n/a	06/26/2018 3:07:47 AM	22	System:CPU Queue ...	
		n/a	n/a	n/a	n/a	n/a	06/25/2018 3:27:13 AM	21	System:CPU Queue ...	
		n/a	n/a	n/a	n/a	n/a	06/27/2018 12:05:53 PM	21	System:CPU Queue ...	



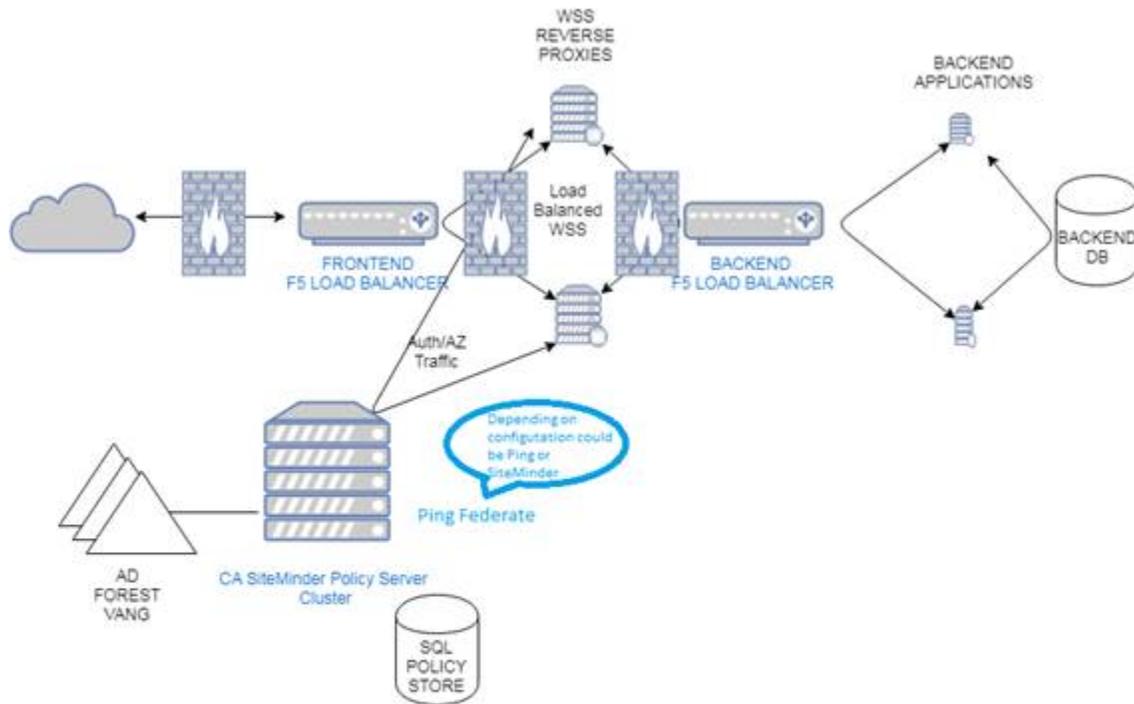
Slow Static Content



Request	Duration
Normal - /crmd/d_tha/start.swe (HTTP:DOM Ready)	12.938 s
Normal - /crmd/d_tha/start.swe (HTTP:DOM Full Load)	6.194 s
Normal - /crmd/d_tha/start.swe (HTTP:DOM Latency)	0.871 s
Normal - /crmd/d_tha/start.swe (HTTP:DOM Processing)	5.320 s
n/a - https://crm /crmd/d_tha/scripts/3rdParty/jqGrid/current/css/ui.jqgrid.css?_scb=16.11.0.0_SIA_[23057]_THA	
n/a - https://crm /crmd/d_tha/files/3rdParty/themes/fullcalendar/fullcalendar.css?_scb=16.11.0.0_SIA_[23057]_THA	
n/a - https://crm /crmd/d_tha/files/3rdParty/themes/switch/jquery.switch.css?_scb=16.11.0.0_SIA_[23057]_THA	
n/a - https://crm /crmd/d_tha/scripts/3rdParty/jquery.calculator/current/jquery.calculator.css?_scb=16.11.0.0_SIA_[23057]_THA	
n/a - https://crm /crmd/d_tha/files/custom/Custom_Desktop2.css?_scb=16.11.0.0_SIA_[23057]_THA	1.809 s
n/a - https://crm /crmd/d_tha/files/3rdParty/font-awesome-4.3.0/css/font-awesome.min.css?_scb=16.11.0.0_SIA_[23057]_THA	
n/a - https://crm /crmd/d_tha/files/3rdParty/font-awesome-4.3.0/css/font-awesome.css?_scb=16.11.0.0_SIA_[23057]_THA	
n/a - https://crm /crmd/d_tha/files/custom/colorbox.css?_scb=16.11.0.0_SIA_[23057]_THA	2.225 s
n/a - https://crm /crmd/d_tha/files/custom/myonoffswitch.css?_scb=16.11.0.0_SIA_[23057]_THA	2.244 s
n/a - https://crm /crmd/d_tha/scripts/swecommon.js?_scb=16.11.0.0_SIA_[23057]_THA	2.536 s
n/a - https://crm /crmd/d_tha/scripts/swecmn_hi.js?_scb=16.11.0.0_SIA_[23057]_THA	2.664 s
n/a - https://crm /crmd/d_tha/scripts/swemessages_tha.js?_scb=16.11.0.0_SIA_[23057]_THA	2.694 s
n/a - https://crm /crmd/d_tha/scripts/siebel/samples/custom_messages.js?_scb=16.11.0.0_SIA_[23057]_THA	
n/a - https://crm /crmd/d_tha/scripts/jsPropset.js?_scb=16.11.0.0_SIA_[23057]_THA	2.803 s
n/a - https://crm /crmd/d_tha/scripts/3rdParty/require.js?_scb=16.11.0.0_SIA_[23057]_THA	2.951 s



Architecture with SiteMinder and F5 in the mix:



All this analysis was performed within 30 hours and here is our happy customer:

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