

Learn how HPE's Mobile Solutions Revolutionize Synthetic Monitoring November 3, 2016

VOUR INDEPEND

COMMUNIT

© Copyright 2016 Vivit Worldwide

Brought to you by





Hosted By



Chris Trimper Manager, QA Engineering Independent Health Western New York Chapter Leader Performance Engineering SIG Leader



Today's Speakers



Cagdas Başaran Senior Specialist, Architecture and Service Management Garanti Bank



Antonina Sesti EMEA Presales Consultant Hewlett Packard Enterprise



Housekeeping

- This "LIVE" session is being recorded
 Recordings are available to all Vivit members
- <u>Session Q&A:</u>

Please type questions in the Questions Pane



Webinar Control Panel

Toggle View Window between Full screen/window mode.

Questions







Mobile Center & BPM

Garanti Bank Service Performance Management and Reporting





Content

- Company Introduction
- Our Focus Real Device Monitoring
- Garanti Bank HPE Suit Architecture
- How Mobile Center Works?
- History of Mobile Center at Garanti Bank
- Apps We Monitor via Mobile Center & BPM
- iOS Instrumentation
- iOS vs Android
- Notification Pop-Ups
- Configuration Needed for Internal Apps

- Problems Detected
- Mobile Center & BPM Specific Configuration
 - Vugen Recording Options
 - Device Lock Idle Time and BPM Script Timeout
 - BPM Script Parameters
- Case Study
 - How to Avoid Fake Alerts
 - Running Two Different Apps on Same Device



Garanti Bank

- The second largest private bank in Turkey with \$107 billion asset size
- Owned by Doğuş Group and BBVA
- 1000 + branches
- Provides retail, commercial, corporate and private banking services to over 13,4 million customers
- 19.800 + employees





Garanti Technology

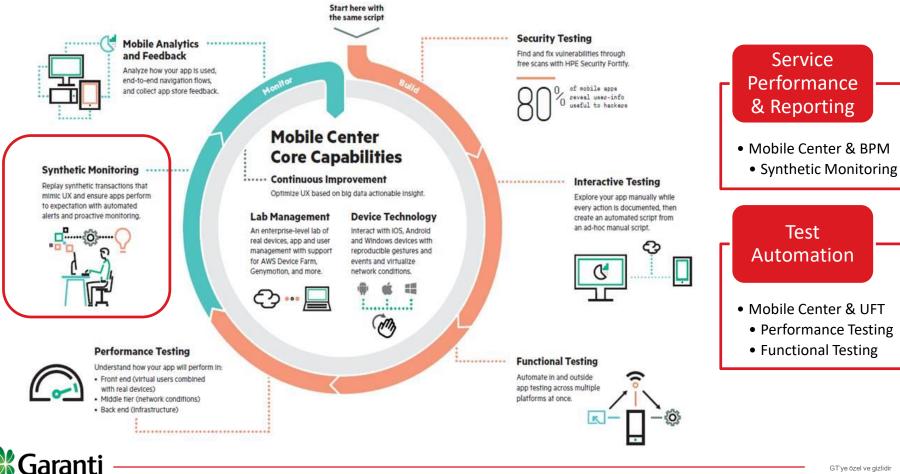
- A wholly-owned subsidiary of Garanti
- One of the largest private internal IT SP in Turkey
- Creates tightly integrated and fully inhouse & custom-fit IT solutions
- Concentrates on design, operation and support, business development, security, applications, systems, operations and network applications
- 1.400 + employees



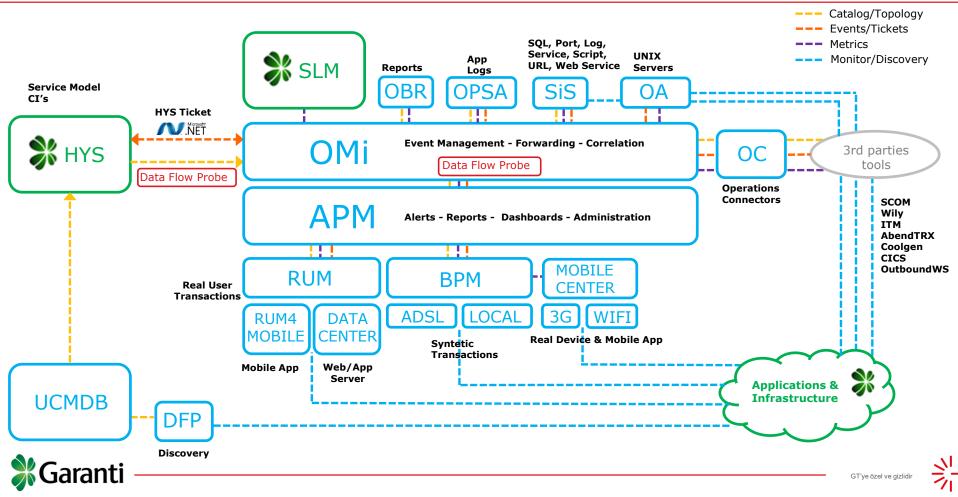




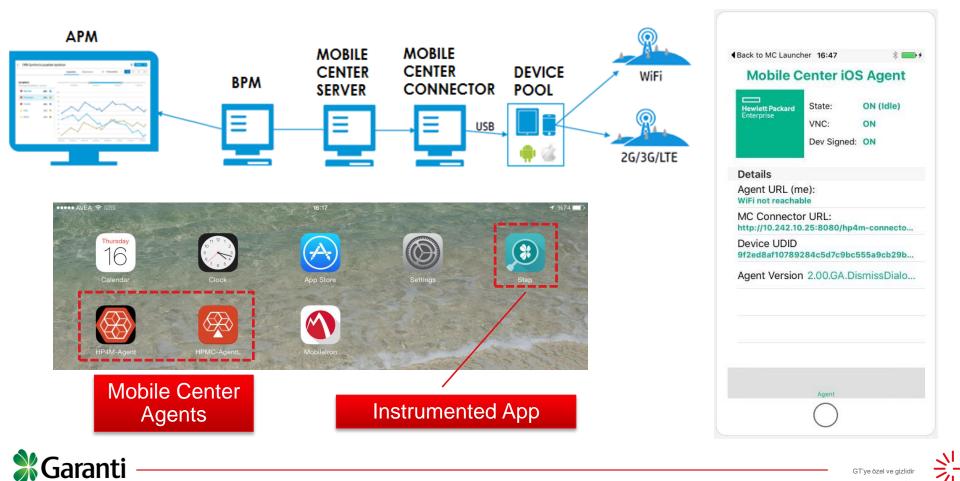
Our Focus – Real Device Monitoring



Garanti Bank HPE Suit Architecture



How Mobile Center Works?



GT'ye özel ve gizlidi

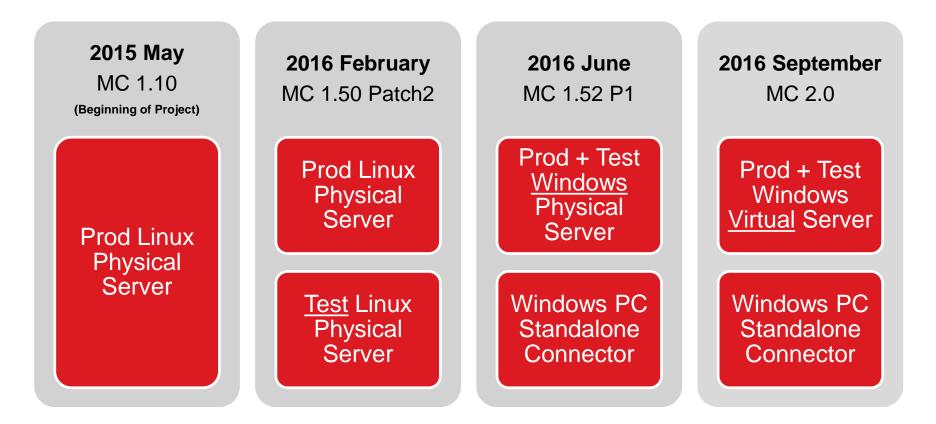
History of Mobile Center at Garanti Bank





GT'ye özel ve gizlidir

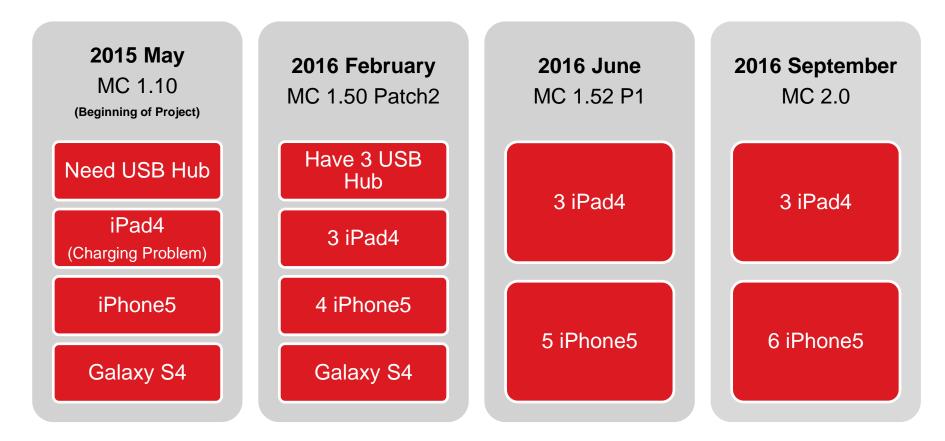
History of Mobile Center at Garanti Bank





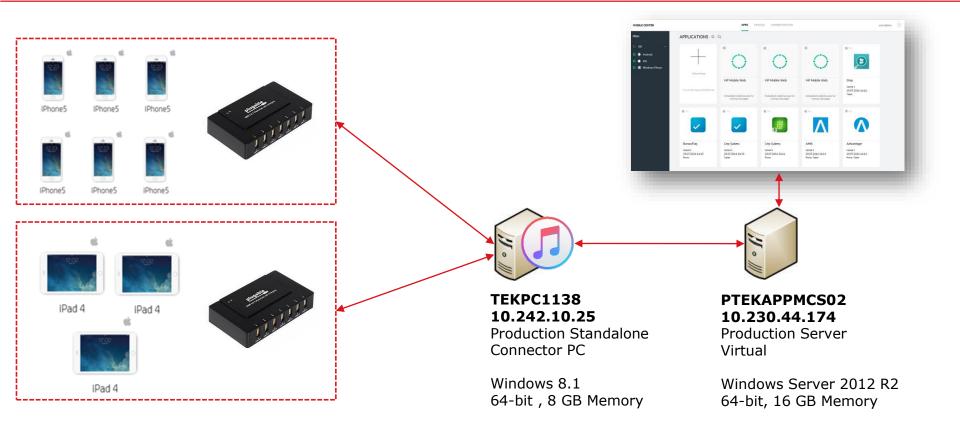
GT'ye özel ve gizlidir

History of Mobile Center at Garanti Bank





Garanti Bank Mobile Center Architecture



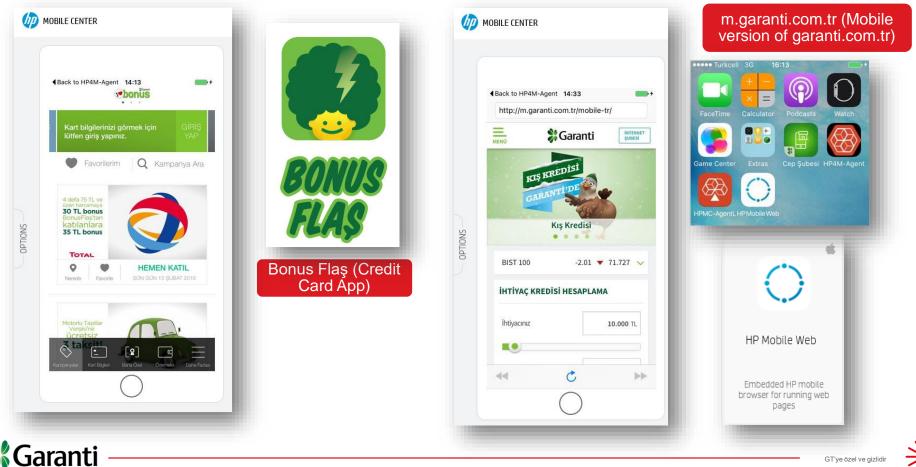


Apps We Monitor via Mobile Center & BPM

	Garanti III	HA31 ▼ %600 ==+ Çkş Vedesiz TL Bekiye 0,00 TL Vedesiz TL K. Bekiye 0,00 TL Kedi Kath K. Limit 0,00 TL	Back to HP4M-Agent 14:41 Garanti Gikiş Hoş Geldiniz
0	Finansal Durum	Hesaplar ve Ürünler	Finansal Durum
	Bankacilik İşlemleri Para Taraforfer Demonstrefer Bapurular	Araçlar Ayarlar Ayarlar Door Covind Door Covind Piyasa Tasibi Bite Ulagan	Hesaplar ve Ürünler Bankacılık İşlemleri Araçlar

11

Apps We Monitor via Mobile Center & BPM

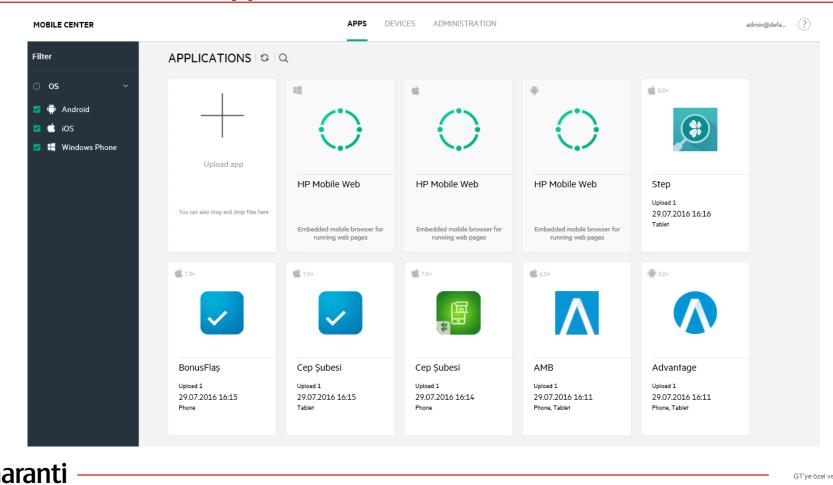


GT'ye özel ve gizlidir

Apps We Monitor via Mobile Center & BPM

MyBSM Applications × Admin × Help × Site Map nalysis Reports > BPM Performance Over Time Image: Comparison of the performance of the performace of the performance	Garanti Business Service Mar	nagement - End l	Jser Manage	ement					Full Screen V	ew User: Cagda	ıs Basaran (Garaı	nti Teknoloji) Logout	l l	
State Registion Audysine Unders Jestises Production Audysis Biostess Process Recognition Model Registis														
State Registion Audysine Unders Jestises Production Audysis Biostess Process Recognition Model Registis														
BHArdenause Over The 1002019 30 PLA-L PLA (QUIT-030) Case Plane PLA (PLA (QUIT-030)). Case Plane PLA (PLA (PLA (QUIT-030))). Case Plane PLA (PLA (PLA (PLA (PLA (PLA (PLA (PLA	Analysis Reports > BPM Performance Over	r Time												
Wer Start Dear Port Start a default period Adaktation: Color Units 330 PM To 100/16 341 PM (00/1-03.00). Start a default period Adaktation: Color Units 330 PM To 100/16 341 PM (00/1-03.00). Start a default period Adaktation: Color Units 330 PM To 100/16 341 PM (00/1-03.00). Start a default period Adaktation: Color Units 330 PM To 100/16 341 PM (00/1-03.00). Start a default period Adaktation: Color Units 330 PM To 100/16 341 PM (00/1-03.00). Start a default period Adaktation: Color Units 330 PM To 100/16 341 PM (00/1-03.00). Start a default period Ministry Mark Mark Mark Color Units 340 PM To 100/16 341 PM (00/1-03.00). Start a default period Ministry Mark Mark Mark Mark Mark Mark Mark Mark	Status Reports Analysis Reports	Utilities	Alerts	Production	n Analysis	Business Process	Recognition	Mobile Reports				00	m.garanti.co	m.tr 🗕
Ver:	BPM Performance Over Time 1/30/2016	3:50 PM-4:41 PM (GMT+	+03:00)Eastern E	European Time										
Ver:	🔽 🚖 ד 🏂 🏹 🕞 Run 🔁 ד	🔥 🕶 🛛 🔣											•Web > 3 devi	ces
Addressions: Consider MorellE Addressions: Applications: Consider A														
Attra Eran, Nori Beston Zelati Zelation	View: Custom View: 1/3	30/16 3:50 PM To: 1/30/1	16 4:41 PM (GM	IT+03:00) 🧔 c	Every: 5 V	Minute(s) 🔻	Set as default p	eriod						
Attra Eran, Nori Beston Zelati Zelation	Applications: Collection: MOBILE												🗖 🛛 Bonus Fla	ş —
 Native app > 2 devices Native app > 2 devices Cep Subesi Native app > 4 devices Native app > 4 devices STEP Container Native + We S devices /ul>		t Sattings)												
Performance Mark: Cope Subset Cope Subset Subse Subset Subset	Active Pillers, None (Restore Delaut	<u>r octangoj</u>											•Native ann >	2 device
Crop by: Transaction Application 03:59 04:00 04:05 04:10 04:15 04:20 04:30 04:3 Kmpanyla: BonusApp_Avea BonusApp BonusApp BonusApp Copy BonusApp Copy BonusApp Copy Copy <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Native app ></td> <td></td>													Native app >	
Brouge by: Transaction Application A 03:59 04:00 04:05 04:10 04:15 04:20 04:30 04:31 Kampanyala BonusApp														
Transaction Application 03:50 04:00 04:05 04:10 04:20 04:25 04:30 04:3 Kmaganyaka_BonusApp_Volda BonusApp Constapp Consta													Cep Suber	si 🗕 🗕
Kampanyakra_BonusApp_Vodatore BonusApp Adevice Kampanyakr_BonusApp_Vodatore BonusApp BonusApp <td>Group by: Transactions</td> <td>8=</td> <td></td>	Group by: Transactions	8=												
Kampanyakra gonusApp Avea BonusApp Kampanyakra gonusApp Lodafone BonusApp Kampanyakra gonusApp Vodafone BonusApp Kampanyakra gonusApp Vodafone BonusApp Login ghone Vodafone CepSubesi Login ghone Vodafone CepSubesi Login ghone Turkcel CepSubesi StepHYSL Optione Turkcel CepSubesi StepLoginserviceperf4	Transaction	Application =	03:50	03:55	04:00	04:05	04:10	04:15	04:20	04:25	04:30	04:3	•Native app >	1 device
Kampanyalar_BonusApp_Avea BonusApp Kampanyalar_BonusApp_Voldatone BonusApp Login_Phone_Yodatone CepSubesi Login_Phone_Voldatone CepSubesi Login_Phone_Turkcell CepSubesi Login_Phone_Turkcell CepSubesi Login_Phone_Turkcell CepSubesi Login_Phone_Turkcell CepSubesi Login_Phone_Turkcell CepSubesi Login_Phone_Turkcell CepSubesi Login_Phone_Turkcell mgaranti.com tr Masayfa_mgaranticomtr_Turkcell mgaranti.com tr Anasayfa_mgaranticomtr_Turkcell mgaranti.com tr StepHYSLoginServiceperf4 StepAps StepLopServiceperf4 StepAps StepLopServiceperf4 StepAps StepLopServiceperf4 StepAps StepLopServiceperf4 StepAps Mature turk Mature turk	KampanyaAra_BonusApp_Avea	BonusApp											- Nalive app > 7	
KampanyaAra_BonusApp BonusApp STEP Login_PAd_Avea CepSubesi CepSubesi Container Native + W Login_Phone_Vodafone CepSubesi CepSubesi Container Native + W Login_Phone_Turkcel CepSubesi CepSubesi CepSubesi Container Native + W Login_Phone_Turkcel CepSubesi CepSubesi CepSubesi CepSubesi CepSubesi Login_Phone_Turkcel CepSubesi CepSubesi CepSubesi CepSubesi CepSubesi CepSubesi CepSubesi CepSubesi SetPHOS_LoginServiceper1 StepApps StepApps CepSubesi StepApps CepSubesi CepSubesi CepSubesi CepSubesi CepSubesi StepApps CepSubesi StepApps StepApps StepApps StepApps StepApps StepApps StepApps StepApps StepApps StepApps <td< td=""><td>Kampanyalar_BonusApp_Vodafone</td><td>BonusApp</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Kampanyalar_BonusApp_Vodafone	BonusApp												
KampanyaAra_BonusApp BonusApp BonusApp <td>Kampanyalar_BonusApp_Avea</td> <td>BonusApp</td> <td></td> <td>- STED</td> <td></td>	Kampanyalar_BonusApp_Avea	BonusApp											- STED	
Logott_Phone_Vodafone CepSubesi - Container Native + W Login_Phone_Vodafone CepSubesi - Container Native + W Login_Phone_Turkcell CepSubesi - Container Native + W Logott_Phone_Turkcell CepSubesi - Container Native + W Logott_Phone_Turkcell CepSubesi - Container Native + W Anasayfa_mgaranticomtr_Vodafone mgaranticomtr - Container Native + W Anasayfa_mgaranticomtr_Avea mgaranticomtr - Container Native + W StepHYSLoginServiceperf StepApps - Container Native + W StepLoginServiceperf StepApps - Container Native + W StepLoginServiceperf StepApps - Container Native + W StepLoginServiceperf StepApps - Container Native + W StepLoginServiceperf <td>KampanyaAra_BonusApp_Vodafone</td> <td>BonusApp</td> <td></td>	KampanyaAra_BonusApp_Vodafone	BonusApp												
Login_Phone_Vodatone CepSubesi > 3 devices Login_Phone_Turkcell CepSubesi > 3 devices Login_Phone_Turkcell CepSubesi > 3 devices Anasayfa_mgaranticomtr_Vodatone mgaranticomtr > 5000+ employee Anasayfa_mgaranticomtr_Turkcell mgaranticomtr > 6 Anasayfa_mgaranticomtr_Turkcell mgaranticomtr > 6 StepHYSLoginServiceperf StepApps > 6 StepLoginServiceperf StepApps > 6 StepLoginServiceperf StepApps > 6 V	Login_iPad_Avea	CepSubesi												
Login_Phone_Turkcell CepSubesi CepSubesi CepSubesi StopAppa Anasayfa_mgaranticomtr_Vodafone mgaranticomt CedSubesi CedSubesi CedSubesi CedSubesi CedSubesi CedSubesi CedSubesi StopAppa CedSubesi CedSubesi <td>Logout_iPhone_Vodafone</td> <td>CepSubesi</td> <td></td> <td>tive + W</td>	Logout_iPhone_Vodafone	CepSubesi												tive + W
Login_Phone_Turkcell CepSubesi CepSubesi CepSubesi StopAppa Anasayfa_mgaranticomtr_Vodafone mgaranticomt CedSubesi CedSubesi CedSubesi CedSubesi CedSubesi CedSubesi CedSubesi StopAppa CedSubesi CedSubesi <td>Login_iPhone_Vodafone</td> <td>CepSubesi</td> <td></td> <td>> 3 devices</td> <td></td>	Login_iPhone_Vodafone	CepSubesi											> 3 devices	
Anasyfa_mgaranticomtr_Turkcell m_garanti.com.tr Anasyfa_mgaranticomtr_Turkcell m_garanti.com.tr Anasyfa_mgaranticomtr_Avea m_garanti.com.tr StepHYSLoginServiceperf StepApps S S S StepApps S S S S S S S S S S S S S S S S S S	Login_iPhone_Turkcell	CepSubesi												
Anasyfa_mgaranticomtr_Turkcell m_garanti.com.tr m_garanti	Logout_iPhone_Turkcell	CepSubesi												/66
Anasayfa_mgaranticomtr_Avea m_garanti.com.tr Garanti Pension StepHYSLoginServiceperf StepApps StepApps StepApps StepApps StepLoginServiceperf StepApps StepApps StepLoginServiceperf StepApps S	Anasayfa_mgaranticomtr_Vodafone	m.garanti.com.tr												
StepApps StepApps Image: Construction of the stepApps Image: ConstepApps		m.garanti.com.tr											Coronti Penei	-
StepHYSLoginServiceperf4 StepApps Image: Constraint of the stepApps of the stepAp	Anasayfa_mgaranticomtr_Avea	m.garanti.com.tr											Garanti Pensic	
StepLoginServiceperf4 StepApps released at December StepLoginServiceperf StepApps stepApps														
StepLoginServiceperf4 StepApps Image: Constraint of the con													 Native app with 	ll be
StepLoginServiceperf StepApps														
	StepLoginServiceperf	StepApps												
		Step-pps										•		
	Less than 20% failed	20% to 40% failed	± 40%	% to 60% failed	₽ ^{60%}	to 80% failed	More th	an 80% failed						
	-		-		-		-							
Less than 20% failed 20% to 40% failed 40% to 60% failed at 60% failed at 60% failed at 60% failed at 60% failed	Garanti –													The second second
													G	T'ye özel ve giz

Mobile Center Gui - Apps

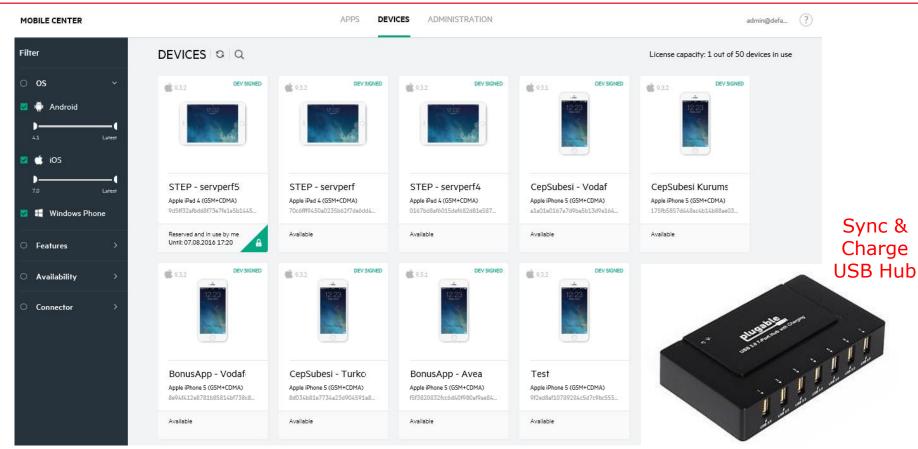


GT'ye özel ve gizlidi

21

Mobile Center - Devices

Garanti



GT'ye özel ve gizlidi

iOS - Instrumentation

۲		TEKMAC2 - Keyboard grabbed		
R	◎ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$			
Ś	Terminal Shell Edit View Window Help		U N	10n 15 Aug
	MobileCenter			
		🏠 cagdasbas — -bash — 118×21		
	Last login: Mon Aug 15 15:19:15 on ttys009 <pre>(cagdasbas@tekmac2: \$./HPMCEnabler CepSubesiv rat Yildirgan (GX49382VHJ)' -p /Users/cagdasb ileprovision -v</pre>			

Certificate and Provision File

- Wildcard Certificate
- Provision file needs to be updated if a new device added to lab.

MAC Account

- We do instrumentation at MAC servers.
- We have accounts like iOS developers.

Instrumentation

• We don't need developers help or don't take their time.



iOS	Only need application ipa file for instrumentation	
	Just need a Mac account	V
Android	Developer support required	
	Dexguard (decompile prevention)	
	USB port security checks	
	Developer version connect test network.	



Support for non-packaged apps

: File View Tools Help				
Connect: • 🕪 • 🚱				
PTEKAPPMCS01 - VUGEN				$\triangleleft \triangleright \times$
MOBILE CENTER 😵 🕂				n x
Interpret And Antiperative Mobile - TruClientNativeMobile1		Apple iDhope	5 (GSM+CDMA)	
Home	MOBILE CENTER		284c5d7c9bc555a9cb29b65ca79	
				-
✓1 © Connect to MC Server 10.230.44.174:8080	ĿБ		· · · · · · · · · · · · · · · · · · ·	
✓ 2 — Prepare mobile device			No SIM 🗢 17:31 🕴 🛄 +	
× 10 ×			🗙 Giriş	
Select Device by ID:				
9f2ed8af10789284c5d7c9bc555a9cb29b65ca79			Minted (TO Minth Numerous)	
▼ Step			Düşteri / T.C. Kimlik Numarası	
Select by Device ID			Parola	
Arguments				
			🔵 Beni Hatırla	
 ✓ 3 — Finalize and launch application 	ZOOM	ŝ		
		OPTIONS	Giriş	
✓ 1 🛄 🛞	- 100% +	OP		
👳 Launch application com.garanti.cepsube 🌅			Müşteri Numaramı Unuttum	
• Step				
▼ Arguments			Parolami Unuttum	
* Logic Name: StartApp Package Name: com.garanti.cepsube v 🗐 v			Güvenlik Uyarıları	
Application Name: com.garanti.cepsube				
Version				
Instrumented: false 👻 📄 🗸				
v			\bigcirc	
Replay succeeded			\cup	

Mobile Center 2.0 New Feature

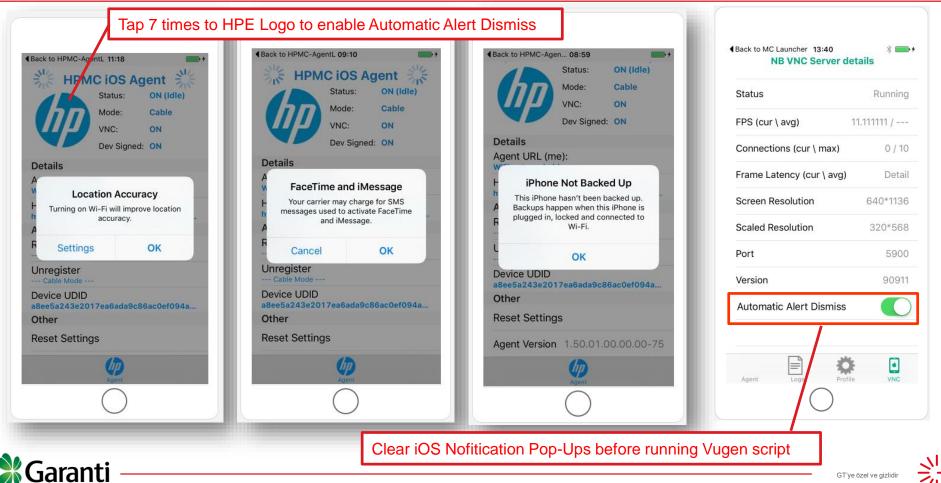
You no longer need to package native apps to upload them to Mobile Center.

All record and replay features are enabled without instrumentation.

As such, applications downloaded from Apple and Google app stores can be tested directly.



iOS Notification Pop-Ups



26

Application Notification Pop-Ups





New Version Push Notification

 Cause BPM script runs to fail and transaction failures



- Changing Push Notification user group
- Giving privilage at versioning application
- Intrument new app version and install to device

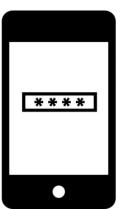
MOBILE CENTER	Apple iPad 4 (1 70c6fff9450a02	GSM+CDMA) 35b62f7de6dd4d682f8835828a						a	
		***** Turkcell ♥ STEP	GB App Store	14:35 Mobiletron	Jabber	AnyConnect	+ %100 ()+		STEP App
ZOOM - 130% +	0					Profil	EN		 Container Native + Web Mobile Iron (MDM) Any Connect (VPN)

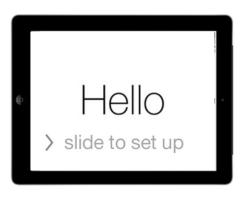


Mobile Center require <u>no</u> <u>passcode</u> on iOS device.

Garanti Bank iOS image installed to iPad has some security policies. Passcode is enabled and it's not possible to remove security policies.

Passcode is also enabled at Mobile Iron profile for all users.









GT'ye özel ve gizlidir

Mobile Center require no passcode on iOS device.

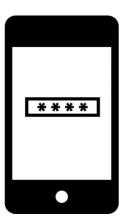
• Password is disabled after security policies removed and mobile iron profile changed.

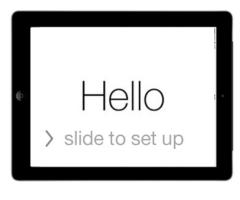
Garanti Bank iOS image installed to iPad has some security policies.

- Company iOS image uinstalled.
- Mobile Iron and Any Connect installed manually.

Passcode is enabled at Mobile Iron profile for all users.

 Mobile Iron profile of Synthetic/System users changed.









Garanti

(Devices	ActiveSync Asso	ociations							
Action:	s 🔹 Add 👻 🛓 E	xport to CSV			Labe	Is All-Smartpho	nes 🗸	service	×		
	DISPLAY NAME	CURRENT PHONE	MODEL	MANUFACT	PLATFORM	HOME COUNT.	STA	REGISTRATI	LAST CH		
\sim	Service PerfUser	PDA 2	Not Available		iOS		Pen				
	ServicePortLice @garanti.com.tr					Na	ne				
		@garanu.com.u				Nai	ne				
		iOS		Company-Owned							
		Data is not available		iOS All-Smartphones Corporate Tablets NO_PASSCODE							
		Data is not available									
				STEP Prod U							
Status Pending Last Check-in N/A											
	Registe	ered On									
Operator Country Name											
		Space Global									

GT'ye özel ve gizlidir 31

Mobile Center – Vugen Recording Options

BonusApplphoneVodafone - HP Virtual User Generator - TruClient - Native Mobile File Edit View Search Design Record Replay Tools Version Control Window Help * * *	Settin		Produc	t Matrix
Actions Script-Wew Script-Wew Browser Settings Interactive Options Mobile Center Settings Encryption Extensions Extensions Value Server Connection (New script only) Use secured connection Server URL:Port Use secured connection Server URL:Port 10 230.44.174.8080 admin@default.com Password - Collect data on		n	 Check co of Mobile BPM & V Load Run 	Center & /ugen/
CPU on device Free memory on device Consumed memory on device Application Install application before execution Delete application after execution Network Virtualization Transactions	Mobile Center version 2.00	Integrating tools Unified Functional Lean Functional Te Business Process T	esting Festing	Version 12.53 12.53 12.53 12.53
Install application before execution not required for BPM]	LoadRunner / Tru Performance Cente Sprinter Network Virtualiza Business Process N	er tion	12.53 12.53 12.53 9.10 9.30

Cyber Attacks

Status Reports Analysis Reports Utilities Alerts	Production Analysis	Business Process Recognition	Mobile Reports	TEKNOLOJI
BPM Performance Over Time 12/25/2015 2:32 PM-3:32 PM (GMT+03:00)Easter	n European Time			TERNOLOJI
🏹 🚖 🛪 😭 🕞 Run 🎦 🕈 🗛 🔻 🌃				Hürriyet > Haberler > Teknoloji > Bankalara siber saldırı bugün de devam ediyor
View: Past hour V From: <u>12/25/15 2:32 PM</u> To: <u>12/25/15 3:32 PM</u> ((GMT+03:00) 🗇 😥 Eve	ry: 5 V Minute(s) V Set as a	lefault period	Bankalara siber saldırı bugün de devam ediyor Hirriyet Haber 23 Aralık 2015 - 07:11 Son Güncelleme : 25 Aralık 2015 -
<u>Applications;</u> CepSubesi <u>Active Filters;</u> None <u>(Restore Default Settings)</u>				
Performance Matrix				
Group by: Transactions V 88				- Contraction of the second
Transaction	02:32 02:35 0	2:40 02:45 02:50 02:	55 03:00 03:05 03:10	03:15
Login_iPad_Avea				
Login_iPhone_Turkcell				
Logout_iPhone_Turkcell				Tweetle G+1 5 12 CROPY
Login_iPhone_Vodafone				- A + / Yorum yaz
Logout_iPhone_Vodafone				Dün başlayan bankalara yönelik siber saldırı bugün de devam ediyor, bazı bankalarda
📕 OK 📕 Minor 📕 Cr	itical	No Data 📃 Do	wntime 🔳 Unknown	işlemler aralıklarla yapılamıyor.
Less than 20% failed 20% to 40% failed 40)% to 60% failed F	60% to 80% failed F Mo	re than 80% failed	Reuters'ın haberine göre Türkiye'de bazı kamu kurumu ve bankaların internet sitelerinin çalışmamasına neden olan siber saldırı bugün de devam ederken, bankalarda aralıklarla işlemler yapılamıyor; kredi kartı ödemeleri gerçekleştirilemiyo

We started monitoring Cep Subesi App with all GSM operators in Turkey during cyber attacs

Compare GSM Operators performance and availability Türkiye'deki başlıca bankaların ve bazı kamu kurumlarının internet sitelerine dün öğleden sonra DDoS olarak adlandırılan suni internet trafiği saldırısı nedeniyle bir





Problems Detected via Mobile Center & BPM

Garanti Business Service M	anagement ·	- End User M	anagement					Full Sc	creen View Use	er: Cagdas Basaran	(Garanti Teknoloji) 🏾 🏾
♦ ♦ • MyBSM Applications •	🕶 Admin 👻 He	elp 👻 Site Map									
Analysis Reports > BPM Performance O	war Timo										
Analysis Reports > BPM Performance O	ver inne										
Status Reports Analysis Repor	rts Utilitie	s A	lerts Pro	oduction Analysis	Business Pr	ocess Recognition	Mobile Re	ports			
BPM Performance Over Time 12/28/2	015 11:00 AM-11:5	5 AM (GMT+03:0	0)Eastern Europea	n Time							
💽 📚 🛪 🌾 🕨 Nun 🎦	• 🙏 • 🛛 🖳										
			4	Date: Today	oneti HP BSM Posit	ive Alert: CepSubesi :	CepSubesi Login BPN	A Transaction Availab	ility Maior Alert	Pzt	t 28.12.2015 11:55
View: Custom View: From:	12/28/15 11:00 AM	To: <u>12/28/15 11</u>	:55 AM (GMT+0				CepSubesi Login BPN				28.12.2015 11:53
					oneti HP BSM Posit	ive Alert: CepSubesi :	CepSubesi Login BPN	I Transaction Availab	ility Critical Alert	Pzt	t 28.12.2015 11:50
Applications: CepSubesi				🚖 PerformansY	oneti HP BSM Posit	ive Alert: <mark>CepSubesi</mark> :	CepSubesi Login BPN	I Transaction Availab	ility Major Alert		t 28.12.2015 11:50
Active Filters: None (Restore Def	ault Settings)						esi Login BPM Transa				t 28.12.2015 11:49
							esi Login BPM Transa				t 28.12.2015 11:46
							esi Login BPM Transa esi Login BPM Transa	-			t 28.12.2015 11:43 t 28.12.2015 11:43
				Performation	offeti The DSWI Alert	Cepsubesi - Cepsub	Con Login Drivi nansa		OF AIEIC	F21	20.12.2013 11.43
Performance Matrix											
Group by: Transactions V	80										A
Transaction	11:00	11:05	11:10	11:15	11:20	11:25	11:30	11:35	11:40	11:45	11:50
Login_iPad_Avea						1	-		1		
Login_iPhone_Turkcell											
Logout_iPhone_Turkcell											
Login_iPhone_Vodafone							=	-		_	
Logout_iPhone_Vodafone											
ок	Minor		Critical		No Data		Downtime	🔳 Un	known		«
Less than 20% failed	20% to 40%	failed	40% to 60% f	ailed 🗲	60% to 80% fai	ed 🗲 I	More than 80% fai	led			
	-	F		F		F					-



Problems Detected via Mobile Center & BPM

leminize devam edilemiyor. zür dileriz, şu anda işleminizi erçekleştiremiyoruz. Lütfen daha sonra tekrar eneyiniz.	İşleminize devam edilemiyor. Özür dileriz, şu anda işleminizi gerçekleştiremiyoruz. Lütfen daha sonra tekrar deneyiniz. Image: Comparison of the second sec	% Garanti
	Parola Beni Hatirla	
on İşlem Tarihi: 02/11/2015 09:37	Giriş	
on Hatalı Giriş: 02/09/2015 14:20~	Müşteri Numaramı Unuttum	Merhaba
VENLIK RESMI	Parolami Unuttum	
	Güvenlik Uyarıları	Giriş
		Parola Al
Onay	L] §⊟ ⊠¶ ♡ Bildirimler Araçlar Piyasalar ATM/Şube	
		Araçlar Piyasalar Para Çekme ATM
	Technical Error	Connection

Problems Detected via Mobile Center & BPM

#Garanti Business Service Management - End User Management	<u>Full Screen View</u> User: Cagdas Basaran 📃									
🕼 🖒 👻 MyBSM Applications 👻 Admin 👻 Help 👻 Site Map										
Analysis Reports > BPM Performance Over Time										
Status Reports Analysis Reports Utilities Alerts Production Analysis Business Process Ref	cognition Mobile Reports									
BPM Performance Over Time 9/9/2016 1:28 PM-2:28 PM (GMT+03:00)Eastern European Time Image:										
View: Past hour ▼ From: 9/9/16 1:28 PM To: 9/9/16 2:28 PM (GMT+03:00) Applications: CepSubesiApp										
Active Filters: Transactions: Filtered (Restore Default Settings)										
Performance Matrix										
Group by: Transactions V	A									
Transaction 01:28 01:30 01:35 01:40 01:45	01:50 01:55 02:00 02:05 02:10 02:15 02:20 02:25									
Login_iPhone_Turkcell										
Login_iPhone_Vodafone										
Login_iPhone_Kurumsal_Avea										
OK Minor Critical No Data Less than 20% failed 20% to 40% failed 40% to 60% failed 60% to 80% failed	Downtime Unknown More than 80% failed									



#Garanti Business Service Management - End User Management	Full Screen View	User: Cagdas Basaran 📃
Analysis Reports > RUM Event Summary		
Status Reports Analysis Reports Utilities Alerts Production Analysis Business Process Recognition Mobile Reports		
RUM Event Summary 9/9/2016 1:29 PM-2:29 PM (GMT+03:00)Eastern European Time □ <t< td=""><td></td><td></td></t<>		
View: Past hour ▼ From: 9/9/16 1:29 PM To: 9/9/16 2:29 PM (GMT+03:00) 🧄 🖒 Every: 2 ▼ Minute(s) ▼ 🔲 Set as default period		
Applications: CepSubesi		
Active Filters: None (Restore Default Settings)		
Event Count by Classification View as Graph View as Table Application Errors	View a	s Graph View as Table
3,004	>>	
✓ — Informational Eve		TechnicalError : CepS
2,253		Request not found : C
₹ Performance Eve		Bad user request : Ce Server error : CepSub
5 1,502		
State 1,502 Performance Eve 9206	4	
751	19	
01128 0136 0136 0136 0136 0136 0136 02:00 02:00 02:00 02:00 02:00 02:01 02:02 02:02		
amine 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		



							MOBILE CEN	TER						
aranti Business Service Management - End Use		ement												
→ MyBSM Applications Admin Help Site	е Мар													
ysis Reports > BPM Performance Over Time									Back to HP4M-Agent			18:03		
atus Reports Analysis Reports Utilities	Alerts	Produ	uction Analy	/sis	Business Pr	rocess R								
PM Performance Over Time 1/20/2016 5:30 PM-6:40 PM (GMT+03	3:00)Eastern E	uropean Time	e											
🖁 📚 🔻 🎼 ⊳ Run 🔁 🕶 🦾 🖛 🛯 🌇														
View: Custom From: 1/20/16 5:30 PM To: 1/20/16	6:40 PM (GM	IT+03:00)	C Ev	/ery: 5 🔻	Minute(s)	•						HAT	A	
Applications: StepApps						7	OOM					orry. We cannot nsaction. Please		
							∃ 140%							-
Active Filters: None (Restore Default Settings)							- 140%	J 9				OK		
erformance Matrix						-								
erformance Matrix						_								
	05:30	05:35	05:40	05:45	05:50	05:55	06:00	06:05	06:10	06:15	06:20	06:25	06:30	06:35
Group by: Transactions V	05:30	05:35	05:40	05:45	05:50	05:55	06:00	06:05	06:10	06:15	06:20	06:25	06:30	06:35
Group by: Transactions V	05:30	05:35	05:40	05:45	05:50	05:55	06:00	06:05	06:10	06:15	06:20	06:25	06:30	06:35
Group by: Transactions ▼ S= ■ Transaction ▲	05:30	05:35	05:40	05:45		05:55			06:10	06:15	06:20	06:25	06:30	06:35
Group by: Transactions ▼ BB III Transaction ▲ tepHYSLoginServiceperf tepHYSLoginServiceperf4	05:30	05:35		05:45	05:50	05:55	06:00	06:05	06:10	06:15	06:20	06:25	06:30	06:35
Group by: Transactions ▼ BB III Transaction ▲ tepHYSLoginServiceperf tepHYSLoginServiceperf4 tepLoginServiceperf	05:30			05:45	11	05:55			.111	06:15		06:25	06:30	06:35
Group by: Transactions ▼ E III Transaction ▲ tepHYSLoginServiceperf tepHYSLoginServiceperf4 tepLoginServiceperf4 tepLoginServiceperf4	Crit 40%		-	No D	11		Downt			M. II.		06:25	06:30	06:35
Group by: Transactions ▼ E III	Crit	tical	-	No D	Data		Downt	ime		M. II.		06:25	06:30	06:35
Group by: Transactions ▼ E III	• Crit 40%	tical % to 60% fail	led	No D 60%	Data to 80% fail	led	Downt More t	ime	led	Unknown	1	06:25		06:35
Group by: Transactions ▼ E III	Crit 40%	tical % to 60% fail	led	No D 60%	Data to 80% fail	led	Downt More t	ime han 80% fai	led action Availa	Unknowr bility Critical	1	06:25	Çar 20	
Group by: Transactions ▼ E III	Crit 40%	tical % to 60% fail Performan Performan Performan	led IsYoneti F IsYoneti F	No D 60% P BSM Pos HP BSM Aler HP BSM Aler	Data to 80% fail itive Alert: Str rt: StepApps rt: StepApps	led tepApps : Sto : StepApps I : StepApps I	Downt More t epApps Login Login BPM Tr Login BPM Tr	ime han 80% fai	led action Availai railability Min railability Min	Unknown bility Critical nor Alert nor Alert	1	06:25	Çar 20 Çar 20 Çar 20 Çar 20 Çar 20	.1.2016 18:24

Garanti Business Service Management - End User Management	•••• Turkcell	(÷			06:17				1 %100
	Kapat								> 0
Analysis Reports > BPM Performance Over Time	_								
Status Reports Analysis Reports Utilities Alerts Pro	duc								
BPM Performance Over Time 8/6/2016 6:00 AM-6:40 AM (GMT+03:00)Eastern European Time	e								
📡 🎭 🏂 🎾 Run 🔁 🕈 🦾 🕶 🗷				Lütfer	Bağlantı hata n Internet ve VPN bi				
				Lutier	kontrol edin!	agiantinizi			
View: Custom ▼ From: 8/6/16 6:00 AM To: 8/6/16 6:40 AM (GMT+03:00) <	\$								
Applications: StepApp					OK				
				-					
Active Filters: None (Restore Default Settings)									
Performance Matrix									
😜 Group by: Transactions 🔹 🔛									^
Transaction	06:00	06:05	06:10	06:15	06:20	06:25	06:30	06:35	
StepLoginServiceperf4				-	-	-			
StepHYSLoginServiceperf4									
StepLoginServiceperf				-	-	-			
StepHYSLoginServiceperf									
StepLoginServiceperf5				-	-	-	1		
StepHYSLoginServiceperf5									
📕 OK 📕 Minor 📕 Critical		No Data		Downtime	Un	known		<	Ì
Less than 20% failed 20% to 40% failed40% to 60% fa	ailed 🗲	60% to 80% fail	ed F	More than 80% fai	led				
. , ,	Ŧ		F						-



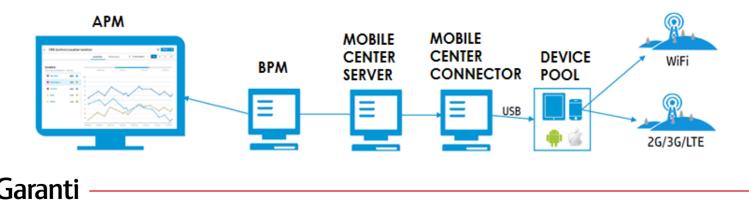
Date: Yesterday																					
🚖 PerformansYoneti HP BSN										rt			11.1.201								
🚔 PerformansYoneti HP BSN	/I Alert: m.garan	ti.com.tr : m.g	aranti.com	n.tr BPM Tr	ransaction	Availabi	lity Criti	ical Alert	:			Pzt 1	11.1.201	6 23:41							
		E 111													10	16		adaa Da	(6	Saranti Te	haala=) 🧰
Garanti Business Service Ma	anagement • Admin • H			ment										ru	Screen	view	User. Ga	guas da	saran (G	baranu re	
MyBSM Applications	Admin 🗸 H	eip 🔹 Site M	ιp																		
Analysis Reports > BPM Performance Ov	ver Time																				
Status Reports Analysis Report	ts Utilitie	es	Alerts	Proc	duction Analy	/sis	Busi	ness Proc	cess Re	cognition		Mobile Re	eports								<
BPM Performance Over Time 01/11/20	016 11:00:00 PM-0	01/12/2016 01:0	0:00 AM (G	MT+03:00)I	Eastern Euro	opean Tii	me														
🕅 🎭 🔹 🍒 🖢 Run 🔁 🔻	• 🛕 • 🛛 🕰																				
View: Custom View:	1/11/16 11:00 PM	To: <u>1/12/16 1:</u>	0 AM (GM	IT+03:00)	. 🗇 🖒 E	Every: 5	5 T 1	Minute(s)	•	Set as	default pe	eriod									
Applications: m.garanti.com.tr																					
Active Filters: None (Restore Defa	ault Settings)																				
	<u>an ootanqoj</u>																				
Performance Matrix																					
Group by: Transactions V	8= 🗰																				Ê
Transaction	11:00 11:05	11:10 11:1	11:20	11:25 11	:30 11:35	11:40	11:45	11:50	11:55	12:00	12:05	12:10	12:15	12:20	12:25	12:30	12:35	12:40	12:45	12:50	12:55
Anasayfa_mgaranticomtr_Turkcell					-	=															
Anasayfa_mgaranticomtr_Vodafone					ਵ ≣ਵ	F															
🔳 ок	Minor		Criti	cal		N N	o Data			_ (Downtim	e			Unknow	'n					< <u>.</u>
Less than 20% failed	20% to 40%	failed	40%	to 60% fa	ailed	F 6	0% to 8	0% failed	ł	₹	More tha	n 80% fa	ailed								
																					▼



Mobile Center and BPM Configuration

Configuration	Value	Default
BPM Script Total Run Time	2 min	-
BPM Script Schedule	Every 5 min	-
BPM Script Timeout	180 sec	900 sec
Mobile Center Device Lock Idle Time	5 min	120 min

These values needs to be compatible with each other.



BPM Script Timeout

#Garanti Business Service Management			nagement A	dministration			Full Scree	en View User: Cagdas	Basara	
	Help 🔻 🗄	Site Map								
Monitoring									_	
			_						_	
Monitoring Script Repository Alerts		Settings	;						_	
Browse Sea	arch and R	eplace	Application	n "m.garanti.com.tr	e		CI Properties Business Proc	ess Monitor Real User	Monitor	
😂 * • 🖆 🐰 🐚 📋 🗙 • 🖉 •					Propert	ies <u>D</u> efault Settings	Data Collectors Reports	s Configuration	_	
End User Monitors		•								
			* 🧷	×					_	
CI	BPM	RUM		Host	Location	Version	Schedules	WebTraces	B	
E- 🛄 End User Monitors										
		0	PTEKBF	M01	PTEKBPM01	9.26	Every 5 minutes, all wee		Mg	
	0	0								
	ŏ	ŏ		≗_		Edit Da	ata Collector Setti	ings		×
	ŏ	ŏ								
E- BonusApp	ŏ	ŏ					Schedules Busi	iness Transaction F	lows Adva	nced Settings
CepSubesi	ŏ	ŏ								
E O StepApps	ŏ	ŏ		Define the	e run mode of the mor	nitors on the selecte	d data collectors			
m.garanti.com.tr	ŏ									
	ŏ	0		Timeout (s	sec.): 180					
E- WEBSERVICE	0	0								
				Run mode	CLASSIC	Step (se	c.): 0			
				Classic	run mode descrip	tion:				
				All scripts	in the Business Trar	saction Flow run se	equentially, according to	the defined order.		
				All WebTr	ace schemes run co	ncurrently with the f	irst script, once the Bus	siness Transaction I	Flow begins	
			P	an iteratio	n.					
Garanti ———				I						
										GT'ye özel ve giz

붉

Mobile Center Device Lock Idle Time

MOBILE CENTER	APPS DEVICES ADMINISTRATION	admin@defa
Users	ADMINISTRATION SETTINGS	
Device Groups	Anonymous access O True False Allowed anonymous access for Appium.	
Settings	Sanitize reports O True O False	
Reservations	Samilize reports log.	
Licenses	Reset idle time after device message Resets the device's idle time whenever a new device message arrives (e.g. logs, metrics, etc.).	
	Device lock idle time in minutes Length of device idle time after which the device will be considered inactive and its lock will be automatically removed	
		VERIFY AND SAVE

Lenght of device idle time after which the device will be considered inactive and its lock will be automatically removed.



GT'ye özel ve gizlidir

Alway Use Script Parameters at BPM Application Configuration

Allows you to update application at device without changing BPM script

Garanti Business Service Management - End Us		Administration
🖕 🖒 👻 MyBSM Applications 🕶 Admin 👻 Help 👻 Si	te Map	
~		
lonitoring		
Monitoring Script Repository Alerts	Settings	
B	rowse Search and R	eplace App
G * • 🖆 🐰 🐚 📋 🗙 • 🖉 •		
End User Monitors		
CI	BPM	RUM
🖻 🗍 End User Monitors		E
- DOMAIN_CONTROLLER		
	0	
E INTRANET	0	
	0	0
	0	
E BonusApp	0	•
⊕- © CepSubesi	0	
E- StepApps	0	0
±- O m.garanti.com.tr	0	
	0	0
	O O	O

	Organize ▼	Open	ots ▼ CepSubesiIpadAvea ▼ ▼ Share with ▼ New f Name ^	iolder	\sim	cripťi recor celd at defa	
on Application "m.garanti	Favorit Favorit Favorit Desk Down Rece Librarie Docu Jubrarie Pictu Pictu Video Compu Video Networ	top Iloads Int Places Is ments Iter	Compile default. default. default. end end end end end end end end end end	fault.cfg - Notepad Edit Format View workConditions vorkConditions of enetworkCond struce=105 =0 =0 =0 =0 =0 =0 =105 =0 =105 =0 =105 =0 =105 =0 =0 =0 =0 =105 =0 =0 =0 =0 =0 =0 =0 =0 =0 =0 =0 =0 =0	Type=5 UserType= itions=0 72-4e28-a8bc-56fa098	3:58 CFG File	
General Applicatio	ion Flows Ord	er	Inconce MobileS	erverPassword.dat	17.09.2014 1	5:31 DAT File	1 KB
Script Parameters	me	Script	Name		Value	It's poss override default.c	Script
MgarantilphoneVor MgarantilphoneVor MgarantilphoneVor MgarantilphoneVor MgarantilphoneVor	dafone dafone dafone dafone dafone dafone	Mgaranti Mgaranti Mgaranti Mgaranti Mgaranti	MobileServerPassword MobileDevice MobileApp MobileServerURL MobileServerUserName	a8ee5a243e2017e com.hp.HPMobile\	ea6ada9c86ac0ef094a9		irameters.



Case Study – How To Avoid Fake Alerts

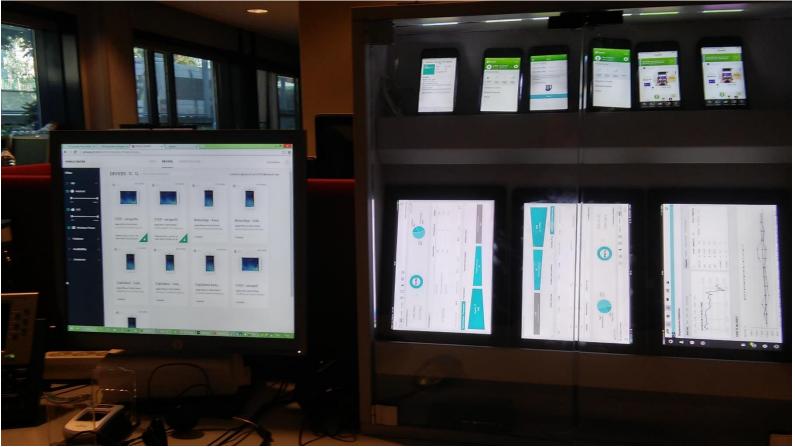
	gement – End User Management								Full Screen	<u>View</u> User	: Cagdas Ba	isaran (Gara	nti Teknoloji)
→ MyBSM Applications → A	Admin ▼ Help ▼ Site Map												
alysis Reports > BPM Performance Over T	ime												
		lways	mor	hitor a	an ar	on or	n moi	re tha	an or	ie de	vice		
Status Reports Analysis Reports	Utilities												
BPM Performance Over Time 1/27/2016 1:		Time											
🌠 🚖 🔹 🌠 🖒 Run 🎦 🔻 🧎	<u>↓</u> ▼ <u></u>												
View: Custom View: 1/27/	<u>16 1:50 PM</u> To: <u>1/27/16 2:50 PM</u> (GMT+03:00).	🗇 🗇 E	very: 5 🔻	Minute(s)	▼ Se	t as default p	period						
Applications: Collection: MOBILE										L Ani or o		J	
Active Filters: None (Restore Default S	ettings)							Ale	rt noi	t trigg	gerec		
								_					
3 devices run E	3PM script every 5	minu	tes										
Performance Matrix				-					/				
								/					
Group by: Transactions V							1		-				
Transaction	Application =	01:50	01:55	02:00	02:05	02:10	02:15	02:20	02:25	02:30	02:35	02:40	02:45
Login_iPad_Avea	CepSubesi							1					- -
	CepSubesi												
Logout_iPhone_Vodafone	CepSubesi CepSubesi				7			₹	=	₹		₹	
Logout_iPhone_Vodafone Login_iPhone_Vodafone					-			=	=	-		=	
Logout_iPhone_Vodafone Login_iPhone_Vodafone Login_iPhone_Turkcell	CepSubesi				7			7	-	4		7	
Logout_iPhone_Vodafone Login_iPhone_Vodafone Login_iPhone_Turkcell Logout_iPhone_Turkcell	CepSubesi CepSubesi				7			4	1	-		4	
Logout_iPhone_Vodafone Login_iPhone_Vodafone Login_iPhone_Turkcell Logout_iPhone_Turkcell	CepSubesi CepSubesi CepSubesi			Alor					-	-			
Logout_iPhone_Vodafone Login_iPhone_Vodafone Login_iPhone_Turkcell Logout_iPhone_Turkcell efinition Details rigger Condition	CepSubesi CepSubesi CepSubesi			Aler		nditit	on - (nsact	-	ail in		ninutes
Logout_iPhone_Vodafone Login_iPhone_Vodafone Login_iPhone_Turkcell Logout_iPhone_Turkcell efinition Details rigger Condition Send the alert if availability is less that	CepSubesi CepSubesi CepSubesi				t Co			6 trar		tion f		15 m	
Logout_iPhone_Vodafone Login_iPhone_Vodafone Login_iPhone_Turkcell Logout_iPhone_Turkcell efinition Details rigger Condition	CepSubesi CepSubesi CepSubesi				t Co			6 trar		tion f		15 m	ninutes

11

Case Study – Running Two Different Apps on Same Device

		Monitoring Script Repository Alerts	Settings					
urkcell 3G 16:13		Ise BPM offset to sche	edule mo	ore th	nan one ar	on on the	e same d	evi
								~
		End User Monitors						_
	atch	СІ		BPM RUM	S Host	Locatio	on Version	
		E- 🚊 End User Monitors						
		DOMAIN CONTROLLER		0	2 РТЕКВРМ01	PTEKBPM01	9.26	E
		E- INTERNET		0 0				
		E- INTRANET		0 0				
center Extras Cep Şubesi HP4M	r-Agent			0 0	<u></u>	Ed	lit Data Collector Set	ttings
				0 0				Sche
		- O BonusApp		0 0				Sche
		E- CepSubesi		0 0	* 🚱 🗙		_	
AgentL HP Mobile Web	Cep Şubesi	+- O StepApps		0	Schedules	Offset (sec.)) Time Zone	
Gentern woole web	1 3	E- O m.garanti.com.tr		0	Every 5 minutes, a	l w 180	Data collector time	PTE
		te- ■ MgarantilphoneAvea		0				
		MgarantilphoneTurkcell		0				
				0			set 180 s	SAC
		+- I PREPROD		0 0				360
1 m.	.garanti.com.tr	WEBSERVICE		0				
	<u> </u>		vse Search and Replace	Business Ti	ansaction Flow "CepSubesilphoneTu	rizcell"		
		G * - 😤 🗶 🕒 🗐 🗙 - 🧷 -				Properties Data Colle	ectors	
				* / 0		P <u>r</u> operties Data Colle	ectors	
siness Transaction Flows Overrid	ding Application Schedule	End User Monitors		* 🖉 💭				
siness Transaction Flows Overrid	ding Application Schedule	End User Monitors CI	BPM RUM	* 🖉 💭 S	Host Locati		Schedu	
iness Transaction Flows Overrid BTF Name	ding Application Schedule	End User Monitors	BPM RUM	S	Host Locati		Schedu	
BTF Name	Last Run Start Time	End User Monitors CI CI CI CI CI CI CI CI CI CI CI CI CI	BPM RUM	S	Host Locati	on Version		
BTF Name arantilphoneAvea	Last Run Start Time 16:23:00 (BPM local time)	End User Monitors	BPM RUM	S	Host Locati 3PM01 PTEKBPM01	on Version	Schedu Every 5 minutes	
BTF Name	Last Run Start Time	End User Monitors CI Time End User Monitors DOMAIN_CONTROLLER DOMAIN_CONTROLLER DINTRANET DINTRANET DISTIRAVET DISTIRAVER	BPM RUM	S	Host Locati 3PM01 PTEKBPM01	on Version 9.26	Schedu Every 5 minutes	
BTF Name arantilphoneAvea arantilphoneTurkcell	Last Run Start Time 16:23:00 (BPM local time) 16:23:00 (BPM local time)	CI	BPM RUM 0 0 0 0 0 0 0 0 0 0	S	Host Locati	on Version 9.26	Schedu Every 5 minutes	
BTF Name arantilphoneAvea arantilphoneTurkcell	Last Run Start Time 16:23:00 (BPM local time)	End User Monitors End User Monitors End User Monitors DoMAIN_CONTROLLER D INTERNET D INTERNET D INTERNET D INTERNET D MOBILE D	BPM RUM 0 0 0 0 0 0 0 0 0 0 0 0 0	S С ртек ж С	Host Locati	on Version 9.26 dit Data Collector Setti	Schedu Every 5 minutes ngs Schedules Mon	
BTF Name garantilphoneAvea garantilphoneTurkcell garantilphoneVodafone	Last Run Start Time 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time)	End User Monitors End User Monitors DoMAIN_CONTROLLER DINTERNET DINTERNET DISTIRAALER DIST	BPM RUM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S С ртек * ©	Host Locati SPMD1 PTEKBPM01 E Schedt es Offset (ec	on Version 9.26 dit Data Collector Setti	Schedu Every 5 minutes ngs Schedules Mon Assigner	
BTF Name garantilphoneAvea garantilphoneTurkcell garantilphoneVodafone	Last Run Start Time 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time)	End User Monitors End User Monitors End User Monitors DoMAIN_CONTROLLER D INTERNET D INTERNET D INTERNET D INTERNET D MOBILE D	BPM RUM 0 0 0 0 0 0 0 0 0 0 0 0 0	S С ртек * ©	Host Locati	on Version 9.26 dit Data Collector Setti	Schedu Every 5 minutes ngs Schedules Mon	
BTF Name garantilphoneAvea garantilphoneTurkcell garantilphoneVodafone	Last Run Start Time 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time)	End User Monitors CI Image: Control of the second	BPM RUM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S С ртек * ©	Host Locati SPMD1 PTEKBPM01 E Schedt es Offset (ec	on Version 9.26 dit Data Collector Setti	Schedu Every 5 minutes ngs Schedules Mon Assigner	
BTF Name garantilphoneAvea garantilphoneTurkcell garantilphoneVodafone	Last Run Start Time 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time)	End User Monitors	BPM RUM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S С ртек * ©	Host Locati SPMD1 PTEKBPM01 E Schedt es Offset (ec	on Version 9.26 dit Data Collector Setti	Schedu Every 5 minutes ngs Schedules Mon Assigner	
BTF Name garantilphoneAvea garantilphoneTurkcell garantilphoneVodafone siness Transaction Flows Overridin BTF Name	Last Run Start Time 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time) ag Application Schedule Last Run Start Time	End User Monitors End User Monitors End User Monitors DomAin_CONTROLLER D INTERNET D INTERNET D INTERALER D MOBILE D MOBILE D MOBILE D MOBILE D CopSube addetail joon B Cop Sube addetail jo	BPM RUM 0 0 0 0 0 0 0 0 0 0 0 0 0	S С ртек * ©	Host Locati SPM01 PTEKBPM01 E Schedu es Offset (ec 5 minut s, all w 10	on Version 9 26 dit Data Collector Setti .) Time Zone Data collector time	Schedu Every 5 minutes ngs Schedules Mon Assigner	
BTF Name garantilphoneAvea garantilphoneTurkcell garantilphoneVodafone siness Transaction Flows Overridin BTF Name apSubesilpadAvea	Last Run Start Time 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time) ag Application Schedule Last Run Start Time 16:22:19 (BPM local time)	End User Monitors CI Time End User Monitors Downing CONTROLLER D DOWNIN CONTROLLER D INTERNET D INTERNET D INTERNET D StrikeAuter D StrikeAuter D Cep Sube and/detail.joon B Cep Sube and/detail.joon B Cep Sube intilaizedas/board.joon	BPM RUM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S С ртек * ©	Host Locati SPM01 PTEKBPM01 E Schedu es Offset (ec 5 minut s, all w 10	on Version 9.26 dit Data Collector Setti	Schedu Every 5 minutes ngs Schedules Mon Assigner	
BTF Name garantilphoneAvea garantilphoneTurkcell garantilphoneVodafone siness Transaction Flows Overridin BTF Name spSubesilpadAvea	Last Run Start Time 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time) ag Application Schedule Last Run Start Time	End User Monitors End User Monitors End User Monitors DomAin_CONTROLLER D INTERNET D INTERNET D INTERALER D MOBILE D MOBILE D MOBILE D MOBILE D CopSube addetail joon B Cop Sube addetail jo	BPM RUM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S С ртек * ©	Host Locati SPM01 PTEKBPM01 E Schedu es Offset (ec 5 minut s, all w 10	on Version 9 26 dit Data Collector Setti .) Time Zone Data collector time	Schedu Every 5 minutes ngs Schedules Mon Assigner	
BTF Name garantilphoneAvea garantilphoneTurkcell garantilphoneVodafone siness Transaction Flows Overridin BTF Name	Last Run Start Time 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time) ag Application Schedule Last Run Start Time 16:22:19 (BPM local time)	End User Monitors	BPM RUM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S С ртек * ©	Host Locati SPM01 PTEKBPM01 E Schedu es Offset (ec 5 minut s. el w 10	on Version 9 26 dit Data Collector Setti .) Time Zone Data collector time	Schedu Every 5 minutes ngs Schedules Mon Assigner	
BTF Name garantilphoneAvea garantilphoneTurkcell garantilphoneVodafone iness Transaction Flows Overridin BTF Name pSubesilpadAvea pSubesilphoneTurkcell	Last Run Start Time 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time) ag Application Schedule Last Run Start Time 16:22:19 (BPM local time) 16:20:10 (BPM local time)	End User Monitors	BPM RUM 0 0 0 0 0 0 0 0 0 0 0 0 0	S С ртек * ©	Host Locati SPM01 PTEKBPM01 E Schedu es Offset (ec 5 minut s. el w 10	on Version 9 26 dit Data Collector Setti .) Time Zone Data collector time	Schedu Every 5 minutes ngs Schedules Mon Assigner	
BTF Name garantilphoneAvea garantilphoneTurkcell garantilphoneVodafone siness Transaction Flows Overridin BTF Name gpSubesilpadAvea gpSubesilphoneTurkcell	Last Run Start Time 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time) 16:23:00 (BPM local time) ag Application Schedule Last Run Start Time 16:22:19 (BPM local time) 16:20:10 (BPM local time)	End User Monitors	BPM RUM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S С ртек * ©	Host Locati SPM01 PTEKBPM01 E Schedu es Offset (ec 5 minut s. el w 10	on Version 9 26 dit Data Collector Setti .) Time Zone Data collector time	Schedu Every 5 minutes ngs Schedules Mon Assigner	

Garanti Bank - Mobile Center Connector & Devices





GT'ye özel ve gizlidir

Advantages of Mobile Center



<u>Real Time</u> on <u>Real Device</u> just like <u>Real Customers</u>

•Before Mobile Center: Emulator + 3G card on a server



Compare

•Wifi - 3G - 4G •GSM Operators performance and availability



Easy Installation and Setup •Standalone connectors •Device farms on different locations



Easy Device Management

Adding new device to labRemote device management



Business Problems

Detect problems related to changes (new version, server changes) on production.
Detect connection issues like VPN problems



Customer Point of View

•Best support experience

•Surprising and useful features on each release



Help & Docs

	HPE Mobile Center Version 2.00 v	Help			Search	
ewlett Packard terprise	Get Started	Set Up Mobile Lab	Automated Testing	Performance Testing	More	Movies
					$\leftarrow \rightarrow \underline{ \varsigma}$	-∃ 23 ≚
P Business Process Monitor		Get Started > Content a				
tware Version: 9.30	Welcome to Mobile Center	Content &	PDFs			
	What's new in Mobile Center	Mobile Center include	es the following help con	tent and PDF guides:		
	Readme	🕀 Indicates an external	link outside this Help Center.			
	My product matrix	Get Started				
	Content and PDFs	Introducing Ma	bile Center	Outlines h	ow administrators and	
PM Real Device Monitoring		infoddenig fie			onitoring engineers use Mobi	le
		What's New in	Mobile Center		the newest features in the la Mobile Center.	test
		Readme 🚓			general information about Mo ch as system requirements ar 5.	
		My product ma	trix		e supported integrations for e Mobile Center.	each
		Installation				
		Install Mobile C	enter	How to in Center.	stall the latest version of Mob	bile
ument Release Date: July 2016		Administrator	Tasks			
unien (Yelesze Date: July 2016 ware Releaze Date: July 2016		Configure the a	app packager		nfigure Mobile Center to pac automatically on upload.	kage
		Administrators	settings	How to co	nfigure the administrator set	tings.
		Add users and	manage your lab	How to m	anage users, apps, and device	25.





裟





GT'ye özel ve gizlidir

Discover 2016 London Nov 29 Dec 1

Discover 2016 London

- Excel London

- In today's idea economy, success favors enterprises that can reinvent to outpace the competition. Discover 2016 can put your enterprise in the lead. Come to the intersection of digital transformation, technology and ideas. Accelerate what's next for your business.
- Join more than 10,000 IT executives, architects, engineers, partners and innovators from around the globe. Accelerate your unique digital transformation journey. Explore how to deliver seamless experiences, harness data, mitigate risk, boost agility and enable workforce productivity.

- Dive into Discover 2016.

Register Now and receive your member discount hpe.com/discover



Discover 2016 London 29, November – 1, December

Top ten reasons to attend

1 📶	2 පි≡	3 Q	4 🖵	5 🔮
Get ready to transform your IT Transforming to a hybrid infrastructure, protecting your digital enterprise, empowering the data-driven organization and enabling workplace productivity can position your enterprise for success. Learn how Hewlett Packard Enterprise is the best strategic digital partner equipping you for transformation.	Hear from the Hewlett Packard Enterprise leadership team and other industry visionaries Learn about our four Transformation Areas and hear directly from President and Chief Executive Officer Meg Whitman and the executive team on how Hewlett Packard Enterprise is helping you go further, faster.	Accelerate next with Hewlett Packard Enterprise Transformation Advisors Bring your digital transformation to life through one-on-one consultations with our solution architects on hand to answer your questions and address your challenges to help you accelerate what's next for your business.	Seize valuable opportunity Time-to-value is the new name of the game, and the ability to capitalize immediately is key to survival. Through the Transformation Zone and Innovation and Spotlight Sessions, you'll learn how HPE can help you transform your organization to significantly reduce the time-to-value of your IT investments.	Accelerate transformation with IT consumption The velocity of change in today's IT world is daunting. Driving innovation while still running the business is essential. Through a series of Spotlight, Theater and Breakout Sessions, learn how you can fund transformation, map your investment strategy to your IT roadmap and achieve faster time-to-market.
6	7 🕀	8 ^{°°} °	9 蓉	10 🔗
Take a sneak peek at tomorrow's technologies Customers and partners under CDA can get early access to preview upcoming Hewlett Packard Enterprise products and solutions.	Find answers to your biggest business and IT challenges Discover 2016 is the perfect place to find solutions, seek new innovations and learn how Hewlett Packard Enterprise can help your enterprise succeed.	Explore the Transformation Zone Interact with experts and peers and learn more about Hewlett Packard Enterprise's most innovative technologies. See the latest products and solutions while speaking with the engineers and architects who created them.	Expand your network and grow relationships Engage with other IT professionals, schedule formal onsite meetings at the Hewlett Packard Enterprise Meeting Center or visit the Guru Bar to chat with Hewlett Packard Enterprise experts.	Tap into the power of our partnersMeet with Discover 2016 sponsors, including Intel and Microsoft, in the Transformation Zone. See how collaboration and our growing network is bringing more opportunity and advantages for you.

Thank you

 Complete the short survey and opt-in for more information from Hewlett Packard Enterprise.

www.hpe.com

www.vivit-worldwide.org

