

Solution Design of Lead LDS

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1. Document Control

1.1. Versioning

Version	Date	Name	Company	Change description
0.0	2016-09-13	Rezeda Teng	HC CN	Draft
1.0	2016-09-14	Rezeda Teng	HC CN	Update SA selection and t_lead_emp table structure
1.1	2016-09-13	Rocket Lo	HC CN	Interface & service specification.
1.2	2016-09-19	Rocket Lo	HC CN	Update base on FS 0.72.
1.3	2016-09-19	Rezeda Teng	HC CN	Merge database part into SD
1.4	2016-09-20	Rocket Lo	HC CN	1.x SD final version base on FS 0.72.
1.5	2016-09-21	Rezeda Teng	HC CN	Amend structure of below tables: t_strategy_setting. t_centralized_parameter_setting Remove t_emp_register table and related logic
1.61	2016-09-26	Rocket Lo	HC CN	Update base on FS 0.8
1.63	2016-09-29	Rezeda Teng	HC CN	Data module
2.0	2016-09-29	Rezeda Teng Rocket Lo	HC CN	Update base on FS 0.81 and Meeting 1. Lead info. will be push into bus db real time from HCI 1 by 1. 2. Data module reviewed and confirmed 3. Job reviewed and confirmed 4. Func & API update
2.1	2016-10-09	Rocket Lo	HC CN	Update data module & func desc

1.2. Reviewers

Name	start date	end date	Company	Responsibility

2. Solution overview

2.1. Business requirements

[FS_Mobile APP of XCL and WCL Lead Management_0.81.docx](#)

[Leads Allocation to SA_Updated_160914.docx](#)

2.2. Scope and Requirement Summary

2.3. Out of Scope Summary

Mobile APP of XCL and WCL Lead Management

2.4. Open Questions

All the issues not closed at the time of release of this document are described in the table. Also the issues closed since the last release are included.

#	Question	Status	comment
4	How to find the 'Intention' lead in owner_int	Wait DWH response	Rebecca: this one has to be confirmed by BA/TSO -> Done [2016-0-10] Wait Rebecca response

2	<p>How to define lead type is XCL/WCL in owner_int db</p> <p>Kate has confirmed, XCL → F_xcllead_tt</p> <p>Wei →</p> <pre> SELECT * FROM OWNER_DWH.DG_CAMPAIGN WHERE NAME_CAMPAIGN_TYPE = 'Lead campaign' AND NAME_CAMPAIGN IN ('WCL_Lead_20150323', _____, 'WCL_Lead_CFC_20140716', _____, 'WCL_WCH_Lead_20150827') </pre>	Wait DWH and Kate response-	<p>[2016-9-10] 1. Wait Rebecca response</p> <p>2. Wait Kate double confirm lead type for WCL</p>
3	<p>How to find the production name/ Address</p> <p>pos id/credit amount of lead in owner_int/gender</p>	Wait BA and DWH response-	<p>[2016-9-10]</p> <p>1. Wait BA response: Lead example to Rebecca and confirm which column is mandatory</p> <p>2. Wait Rebecca response</p>

4	<p>How to get the relation between lead and contract in owner_int</p> <p>Match condition:</p> <p>XCL- Client name + ID card number + lead type in 'XCL.'</p> <p>WCL- Client name + phone number + lead type in 'WCL.'</p>	Wait Rocket update	<p>Relation-> sr.name</p> <pre> select /*+parallel(4)*/ sr.name from owner_int.vh_hom_lead l join owner_int.vh_hom_campaign_account ca on (l.ID = ca.ID_ACCOUNT) join owner_int.vd_hom_campaign_setting cs on (ca.ID_CAMPAIGN_SETTING = cs.ID) join owner_int.vh_hom_campaign_account_stage cas on (cas.ID_CAMPAIGN_ACCOUNT = ca.ID) join owner_int.vh_hom_account_activity aa on (aa.ID_CAMPAIGN_ACCOUNT_STAGE = cas.ID) join owner_int.vd_hom_result_reason rr on (rr.ID = cas.ID_RESULT_REASON) join owner_int.vd_hom_stage_result sr on (sr.ID = rr.ID_STAGE_RESULT) where l.ID = 5370317 </pre>
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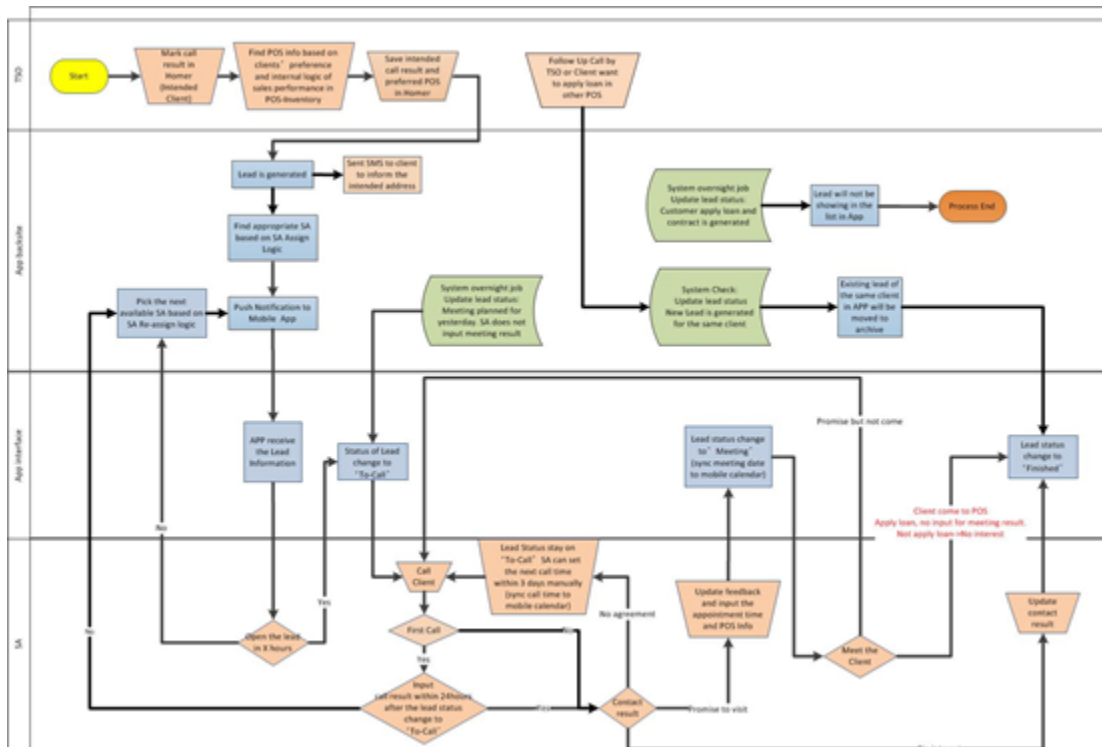
5	<p>How to find the pos loan contract of SA in owner_int</p>	Wait DWH response	<p>Posloan -> vh_hom_agreement_data.id</p> <p>select ad.id from owner_int.vh_hom_agreement_data ad</p> <p>join owner_int.vh_hom_employee e on (ad.ID_EMPLOYEE_CONSULTANT=e.ID_EMP)</p> <p>where e.ID_EMP=93643</p>
6	<p>How to find the pos application in homer db.</p> <p>logs of each pos' apply contracts time</p> <p>homer db:</p> <p>owner_dwh.dc_application</p> <p>owner_dwh.f_application_tt</p>	Wait DWH response	<p>pos application -> vh_hom_agreement_data.*</p> <p>select ad.id</p> <p>from owner_int.vh_hom_employee e</p> <p>join owner_int.vh_hom_agreement_data ad on (ad.ID_EMPLOYEE_CONSULTANT=e.ID_EMP)</p> <p>join owner_int.vh_hom_employee_place ep on (e.ID_EMP=ep.ID_EMPLOYEES)</p> <p>where ep.ID_SELLERPLACE = '49460'</p>
7	<p>SA first activation time</p> <p>Kate has confirmed : F_employ_tt, use homer data</p>	Wait DWH response	<p>SA first activation time-> e.FIRST_CONTRACT_DATE</p> <p>SELECT e.FIRST_CONTRACT_DATE FROM owner_int.vh_hom_employee e</p>

8	SA allow to do WCL applications	Wait DWH response	<pre>SELECT * FROM owner_int.vh_hom_employee e join owner_int.VH_hom_admusergroup A ON (E.ID_EMP=A.ID_EMP) JOIN owner_int.vd_hom_admgroup(not in bus db) ag on (ag.ID=a.ID_GROUP) where ag.ID!=6965</pre>
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9	<p>1. SA bind to WCL Branch POS</p> <p>2. DSM(WCL mentor) bind to WCL Branch POS</p> <p>homer db: owner_dwh.f_employee_2_salesroom_tt</p> <p>owner_dwh.cl_salesroom_type</p>	Wait DWH response	<p>SA:</p> <pre>select e.* from owner_int.vh_hom_employee e join owner_int.vh_hom_employee_place ep on (e.ID_EMP = ep.ID_EMPLOYS) join owner_int.vh_hom_sellerplace sp on (ep.id_sellerplace = sp.ID) join owner_int.vd_hom_registers reg on (sp.TYPE_SALROOM = reg.REG_VAL_CODE and reg.REG_NUMBER = 40) where reg.REG_VAL_NAME in ('WCL Branch', 'WCL POS');</pre> <p>DSM:</p> <pre>select sp.ID_BUSSMAN from owner_int.vh_hom_employee e join owner_int.vh_hom_employee_place ep on (e.ID_EMP=ep.ID_EMPLOYS) join owner_int.vh_hom_sellerplace sp on (ep.id_sellerplace=sp.ID) join owner_int.vh_hom_employee e2 on (sp.ID_BUSSMAN=e2.ID_EMP) where e2.BANKROLE_CODE = 'sle'--DSM</pre>
10	<p>SA bind with POS without DSM</p> <p>HOMER DB:</p> <p>OWNER_DWH.F_EMPLOYEE_2_SALESROOM_TT</p>	Wait DWH response	<pre>select t.id_employs,t.id_sellerplace from OWNER_INT.INT_HOM_EMPL OYEE_PLACE t</pre>

3. Function specification/Solution design

3.1. Business process overview



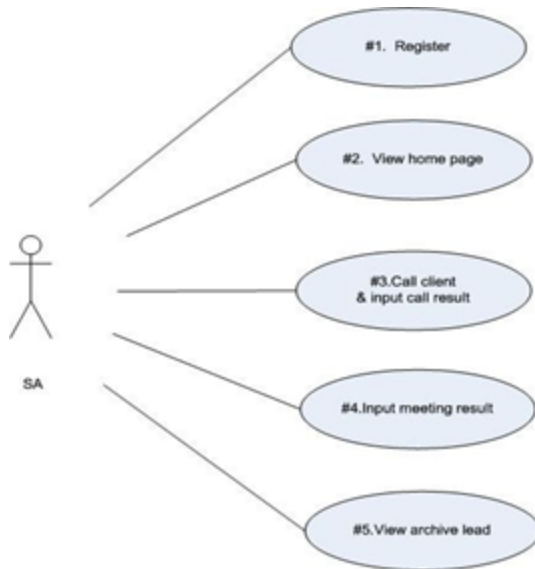
3.2. Application landscape

3.3. Integration

3.4. UI design

3.5. Miscellaneous

3.5.1. Use case diagram



3.6. Data Model Design

3.6.1. I HOMER2DWH Table Mapping

table	name	Foreign key	Column
vh_hom_lead	l		
vh_hom_campaign_account	ca	l.ID=ca.ID_ACCOUNT	
vd_hom_campaign_setting	cs	ca.ID_CAMPAIGN_SETTING=c s.ID	
vh_hom_campaign_account_sta ge	cas	cas.ID_CAMPAIGN_ACCOUNT =ca.ID	Type= like %WCL/XCL%
vh_hom_account_activity	aa	aa.ID_CAMPAIGN_ACCOUNT_ STAGE=cas.ID	
vd_hom_result_reason	rr	rr.ID=cas.ID_RESULT_REASON	
vd_hom_stage_result	sr	sr.ID=rr.ID_STAGE_RESULT	Intension = sr.NAME like '%%'
vh_hom_agreement_person	ap	c.ID_PRODUCT=p.ID	
vh_hom_agreement_data	ad	ap.ID_CREDIT=ad.ID_CREDIT	
vh_hom_credit	c	ap.ID_CREDIT=c.ID	
vd_hom_product	p		
vd_hom_prod_channel	pc	p.ID_CHANNEL=pc.ID	
vh_hom_agreement_address	d		
vh_hom_sellerplace	sp	ep.id_sellerplace=sp.ID	
vh_hom_employee	e		
vh_hom_employee_place	ep	e.ID_EMP=ep.ID_EMPLOY	

vd_hom_registers	reg	sp.TYPE_SALROOM=reg.REG_VAL_CODE and reg.REG_NUMBER=40	
VH_hom_admusergroup	a	E.ID_EMP=A.ID_EMP	
vd_hom_admgroupp	ag	ag.ID=a.ID_GROUP	

3.6.2. Eg. owner_int.vh_hom_lead- lead information

column	data type	description
Id	NUMBER(22)	Id not null
Lead_id	NUMBER(22)	Lead Id not null
cus_name	VARCHAR2(20)	Customer Name
cus_gender	VARCHAR2(20)	Customer Gender
cus_mobile_phone	NUMBER(11)	Customer Phone Number not null
pos_id	NUMBER(22)	Intended POS not null
Pro_type	VARCHAR2(20)	Product Type not null
Loan_limit	NUMBER(22)	Loan limit
installment	NUMBER(2)	Installment
.....

3.6.3. 0.1.1 app_lead_gateway.t_lead_emp

column	data type	default	Nullable	description
id	number(22)		NO	primary key
id_emp	number(22)		YES	employee id
id_lead	number(22)		NO	Lead id
customer_name	varchar2(50)		YES	Customer Name
customer_gender	varchar2(2)	Y	YES	Customer Gender
customer_phone_number	varchar2(50)		NO	Customer Phone Number
intended_POS	varchar2(50)		NO	Intended POS
id_pos	number(22)		NO	pos id
product_type	varchar(10)		NO	XCL,WCL,TopUp

loan_limit	number(22)		YES	Loan amount
Installment	number(2)		YES	installment number
lead_status	number(2)	0	NO	0:init, 1:new, 2:to call, 3:meeting, 4:finished
Assign_time	Datetime		YES	Assign time
Accept_time	Datetime		YES	First to_call date time
Status_remark	number(2)		YES	1:contract generated 2:not accept 3:active check 4:to call times overload 5:to call time out 6:new time out
First_calling_time	dateTime		YES	First calling time when SA call on APP
call_result	number(2)	0	NO	0: init. 1: call again (No contact/ No time/ No agreement on meeting. Lead status remains in 'To call'. 2: 'To call' status happens over X times(Centralized parameter in Global Setting specify by product type (WCL, XCL)), Lead status changes to be 'Finished'. 3: call result =no interest (No interest/Rejects meeting on POS). Lead status changes to be 'Finished'. 4: call result = Meeting, Lead status changes to be 'Meeting'.

meeting_result	number(2)	0	YES	0: init. 1. If visit result = No interest, Lead status changes to be 'Finished'. 2. If visit result = Re-contacting, Lead status changes to be 'To call'.
feedback_time	Datetime		YES	First Call result feedback time
to_call_times	number(2)		YES	0,1,2,3...
comment	varchar2(100)		YES	comment
meeting_call_time	Datetime		YES	meeting time/call time
last_meeting_call_time	Datetime		YES	last meeting time/call time
contract_generated	number(1)	0	NO	0: init. 1: contract generated
id_credit	number(22)		YES	id of contract table
cdate	Datetime	sysdate	NO	Data insert time
edate	Datetime	sysdate	NO	Date modify time

i. partition on Edate column.

- a) If call result = call again (No contact/ No time/ No agreement on meeting. Lead status remains in 'To call'.
- b) If 'To call' - 'To call' status happens over X times(Centralized parameter in Global Setting specify by product type (WCL, XCL)),
- c) Lead status changes to be 'Finished'.
- d) If call result =no interest (No interest/Rejects meeting on POS). Lead status changes to be 'Finished'.
- e) If call result = Meeting, Lead status changes to be 'Meeting'.
- f) If visit result = No interest, Lead status changes to be 'Finished'.
- g) If visit result = Re-contacting, Lead status changes to be 'To call'.

3.6.4. 0.1.2 app_lead_gateway. t_lead_code_dictionary

column	data type	default	nullable	description
id	number(22)		NO	primary key
code_key	number(22)		YES	employee id
code_value	number(22)		NO	Lead id
cdate	Datetime	sysdate	NO	Data insert time
edate	Datetime	sysdate	NO	Date modify time

demo value

CODE_KEY	CODE_VALUE
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CALL_STATUS_NOT_ASSIGNED	0
CALL_STATUS_NEW	1
CALL_STATUS_TO_CALL	2
CALL_STATUS_MEETING	3
CALL_STATUS_FINISHED	4
STATUS_REMARK_CONTRACT_GENERATED	1
STATUS_REMARK_NOT_ACCEPT	2
STATUS_REMARK_ACTIVE_CHECK	3
STATUS_REMARK_TO_CALL_TIMES_OVERLOAD	4
STATUS_REMARK_TO_CALL_TIMEOUT	5
STATUS_REMARK_NEW_TIMEOUT	6
CALL_RESULT_DEFAULT	0
CALL_RESULT_NOT_CONTACT	1
CALL_RESULT_NO_TIME	2
CALL_RESULT_NO_AGREEMENT_ON_MEETING	3
CALL_RESULT_NO_INTEREST	4
CALL_RESULT_REJECTS_MEETING_ON_POS	5
CALL_RESULT_MEETING	6
MEETING_RESULT_DEFAULT	0
MEETING_RESULT_NO_INTEREST	1
MEETING_RESULT_RE_CONTACTING	2

3.6.5. 0.1.3 app_lead_gateway.t_lead_notification

- insert data when lead assign to SA in db job, update status when pushed to app.

column	data type	default	nullable	description
id	NUMBER(22)		NO	primary key
ld_emp	NUMBER(22)		NO	SA id in employ table
id_lead	NUMBER(22)		NO	Lead id
push_status	NUMBER(1)	1	NO	1:init 2:pushed
cdate	DATE	SYSDATE	NO	Data insert time
edate	DATE	SYSDATE	NO	Date modify time

1. index on push_status column

2. partition on cdate column

3.6.6. 0.1.4 app_lead_gateway.t_sa_login

- record SA login time for SA assign logic, each day one record for one SA

column	data type	default	nullable	description
id	NUMBER(22)		NO	primary key
Id_emp	NUMBER(22)		NO	SA id of employ
id_lead	NUMBER(22)		NO	lead id
verification_code	NUMBER(4)		YES	The latest vCode.
cdate	DATE	SYSDATE	NO	Data insert time
edate	DATE	SYSDATE	NO	Date modify time

3.6.7. 0.1.5 app_lead_gateway.t_strategy_setting.

- Setting parameter table for SA assign logic.

Note: Sale business user will do the configuration.

COLUMN	DATA TYPE	DEFAULT	NULLABLE	DESCRIPTION
ID	NUMBER(22)		NO	PRIMARY KEY
STRATEGY_LEVEL	VARCHAR2(10)	SIMPLE	NO	SIMPLE/WCL1/WCL2/WCL3/ CLX1/CLX2/CLX3/CLX4/ CLX5/CLX6/CLX7
STRATEGY_KEY	VARCHAR2(50)		NO	STRATEGY KEY
STRATEGY_VALUE	VARCHAR(10)		NO	NUMBER, >, < , =
STRATEGY_DESC	VARCHAR(100)		YES	STRATEGY DESCRIPTION
CDATE	DATETIME	SYSDATE	NO	Data insert time
EDATE	DATETIME	SYSDATE	NO	Date modify time

table value

STRATEGY_LEVEL	STRATEGY_KEY	STRATEGY_VALUE	STRATEGY_DESCRIPTION
simple	Con_Hang_up_triggered	1	number which will be config by business user
simple	Con_App_opened_today	1	number which will be config by business user
simple	Con_Age_30D	1	number which will be config by business user

simple	Con_Age_60D	1	number which will be config by business user
simple	Con_Leads_num_new	1	number which will be config by business user
simple	Con_Leads_num_to_call	1	number which will be config by business user
simple	Con_Prob_application_4D_last_30	1	number which will be config by business user
simple	Con_Response_new_to_call_last_30	1	number which will be config by business user
simple	Con_Response_new_first_calling_last_30	1	number which will be config by business user
simple	Con_Response_new_feedback_last_30	1	number which will be config by business user
simple	Con_POSL_units_last_30D	1	number which will be config by business user
simple	Con_lead_prev_not_accepted	1	number which will be config by business user
simple	Con_rand	1	number which will be config by business user
simple	Con_last_application_on_POS	1	number which will be config by business user
simple	Con_WCL_privilege	1	number which will be config by business user
simple	Con_WCL_Centralized_Team	1	number which will be config by business user
simple	Con_Leads_Number_MTD	1	number which will be config by business user
simple	Trs_Hang_up_triggered	120	number which will be config by business user
simple	Trs_App_opened_today	120	number which will be config by business user
simple	Trs_Age_30D	120	number which will be config by business user
simple	Trs_Age_60D	120	number which will be config by business user
simple	Trs_Leads_num_new	120	number which will be config by business user
simple	Trs_Leads_num_to_call	120	number which will be config by business user
simple	Trs_Prob_application_4D_last_30	120	number which will be config by business user
simple	Trs_Response_new_to_call_last_30	120	number which will be config by business user

simple	Trs_Response_new_first_calling_last_30		120	number which will be config by business user
simple	Trs_Response_new_feedback_last_30		120	number which will be config by business user
simple	Trs_POSL_units_last_30D		120	number which will be config by business user
simple	Trs_lead_prev_not_accepted		120	number which will be config by business user
simple	Trs_rand		120	number which will be config by business user
simple	Trs_last_application_on_POS		120	number which will be config by business user
simple	Trs_WCL_privilege		120	number which will be config by business user
simple	Trs_WCL_Centralized_Team		120	number which will be config by business user
simple	Trs_Leads_Number_MTD		120	number which will be config by business user
simple	Ope_Hang_up_triggered	<		<,>=
simple	Ope_App_opened_today	<		<,>=
simple	Ope_Age_30D	<		<,>=
simple	Ope_Age_60D	<		<,>=
simple	Ope_Leads_num_new	<		<,>=
simple	Ope_Leads_num_to_call	<		<,>=
simple	Ope_Prob_application_4D_last_30	<		<,>=
simple	Ope_Response_new_to_call_last_30	<		<,>=
simple	Ope_Response_new_first_calling_last_30	<		<,>=
simple	Ope_Response_new_feedback_last_30	<		<,>=
simple	Ope_POSL_units_last_30D	<		<,>=
simple	Ope_lead_prev_not_accepted	<		<,>=
simple	Ope_rand	<		<,>=
simple	Ope_last_application_on_POS	<		<,>=
simple	Ope_WCL_privilege	<		<,>=
simple	Ope_WCL_Centralized_Team	<		<,>=
simple	Ope_Leads_Number_MTD	<		<,>=
simple	Poi_Hang_up_triggered		5	number which will be config by business user

simple	Poi_App_opened_today		5	number which will be config by business user
simple	Poi_Age_30D		5	number which will be config by business user
simple	Poi_Age_60D		5	number which will be config by business user
simple	Poi_Leads_num_new		5	number which will be config by business user
simple	Poi_Leads_num_to_call		5	number which will be config by business user
simple	Poi_Prob_application_4D_last_30		5	number which will be config by business user
simple	Poi_Response_new_to_call_last_30		5	number which will be config by business user
simple	Poi_Response_new_first_calling_last_30		5	number which will be config by business user
simple	Poi_Response_new_feedback_last_30		5	number which will be config by business user
simple	Poi_POSL_units_last_30D		5	number which will be config by business user
simple	Poi_lead_prev_not_accepted		5	number which will be config by business user
simple	Poi_rand		5	number which will be config by business user
simple	Poi_last_application_on_POS		5	number which will be config by business user
simple	Poi_WCL_privilege		5	number which will be config by business user
simple	Poi_WCL_Centralized_Team		5	number which will be config by business user
simple	Pot_Leads_Number_MTD		5	number which will be config by business user

3.6.8. 0.1.6 app_lead_gateway.t_strategy_record.

column	data type	default	Nullable	description
id	Number(22)		No	id
id_lead	Number(22)		No	Lead id
id_sa	Number(22)		No	SA id
score	Number(10)		Yes	calculate score for the lead

Strategy	varchar(10)	Simple	Yes	Simple/WCL1/WCL2/WCL3/
				CLX1/CLX2/CLX3/CLX4/CLX5/CLX6/CLX7
Var_Hang_up_triggered	Number(1)		Yes	Hang_up mode switched on then 1 else 0
Var_App_opened_today	Number(1)		Yes	App was opened today after 6:00 then 1 else 0
Var_Age_30D	Number(1)		Yes	If <30D then 0 else 1
Var_Age_60D	Number(1)		Yes	If <60D then 0 else 1
Var_Leads_num_new	Number(10)		Yes	Actual (real-time) number of leads in status "new"
Var_Leads_num_to_call	Number(10)		Yes	Actual (real-time) number of leads in status "to call"
Var_Prob_application_4D_last_30	Number(10)		Yes	leads from denominator turned into application within 4D since sending the lead to SA
Var_Response_new_to_call_last_30	Number(10)		Yes	time difference for last 30 leads between
Var_Response_new_first_calling_last_30	Number(10)		Yes	time difference for last 30 leads between
Var_Response_new_feedback_last_30	Number(10)		Yes	time difference for last 30 leads between
Var_POSL_units_last_30D	Number(10)		Yes	Number of POSL contracts in last 30D
Var_lead_prev_not_accepted	Number(1)		Yes	1 = lead was sent to this SA and it wasn't accepted in the last 24H, else 0
Var_rand	Number(1,8)		Yes	Rand number from interval (0,1), eg.0.12345678
Var_last_application_on_POS	Number(1)		Yes	1 = SA was the last one who did any application (any product) on the selected POS, else 0
Var_WCL_privilege	Number(1)		Yes	1=SA is allowed to do WCL applications
Var_WCL_Centralized_Team	Number(1)		Yes	1=WCL Centralized Team
Var_Leads_Number_MTD	Number(10)		Yes	Number of Leads SA have already received till now within current calendar month
cdate	Datetime	sysdate	No	Data insert time

edate	Datetime	sysdate	No	Date modify time
-------	----------	---------	----	------------------

3.6.9. 0.1.7 app_lead_gateway.t_centralized_parameter_setting

column	data type	DEFAULT	NULLABLE	description
id	number(22)		no	primary key
parameter_key	varchar2(100)			parameter name
parameter_value	varchar2(50)			parameter value
parameter_desc	varchar2(100)			parameter description
cdate	DATETIME	SYSDATE	NO	Data insert time
edate	DATETIME	SYSDATE	NO	Date modify time

t_centralized_parameter_setting value		
parameter_key	parameter_value	description
multi_strategy	0: simple 1: multi	lead assign logic according to which strategy
wcl_max_num_of_one_calendar_month	500	Maximum No of leads within one calendar month WCL each SA
wcl_max_num_of_active_lead	100	Maximum No of active leads WCL each SA
xcl_max_times_of_to_call	3	'To call' status happens over X times XCL
wcl_max_times_of_to_call	3	'To call' status happens over X times WCL
wcl_days_of_archive_lead	7	X days of leads can be shown in Archive lead WCL
xcl_days_of_archive_lead	7	X days of leads can be shown in Archive lead XCL
days_of_next_call_time	3	SA could set next call time and it should be within X days
wcl_max_hour_of_assign_timeout	3	SA doesn't open the app with assigned lead in X hour WCL
xcl_max_hour_of_assign_timeout	3	SA doesn't open the app with assigned lead in X hour XCL
xcl_schedule_of_active_new_lead_check_job	9am-8pm	clean_and_clone_new_lead_job running working hours XCL
wcl_schedule_of_active_new_lead_check_job	9am-8pm	clean_and_clone_new_lead_job running working hours WCL
send_sms_by_pos_inventory	0: not disable 1: disable	Disable the function of POS Inventory for sending SMS message to DSM/SA/Client manually

3.7. Deployment diagram

3.7.1.1. REQ1_ Register validation

3.7.1.2. 0.1.1.1 SA Register validate API (Media Type: application/json)

I <http://hccdomain/lead-gateway/api/rs/vh>

RegisterService : validateHomerID(Long HomerID)

I <http://hccdomain/lead-gateway/api/rs/vp>

RegisterService : validatePassword(Long HomerID, String Password)

I <http://hccdomain/lead-gateway/api/rs/sm>

RegisterService : sendVerifiCode2SA(Long HomerID)

I <http://hccdomain/lead-gateway/api/rs/vvc>

RegisterService : validateVerifiCode(Long HomerID, String VerifiCode)

Response:

```
{  
  "result ":"0"  
}
```

Or

```
{  
  "result ":"1",  
  "errCode ":"10010"  
}
```

NAME	VALUE
result	0 – success 1 - failed
errCode	10011 – Not found the ID 10021 – Password isn't correct. 10022 – Your Account is not available. 10031 – Send SMS to the SA failed. 10041 – Verification Code isn't correct. 10042 - Verification Code overdue. (Default 2 mins)

--	--

3.7.1.3.

3.7.1.4. 0.1.1.2 SA Register Data Module Specification

column	data type	description
usr_name	number	HomerId,(Standard Homer ID is 6 digit. e.g. 110039)
usr_password	varchar2(15 char)	Mock – will base LDAP (TBC)
emp_status	varchar2(1 char)	employee status a:active n:inactive
bankrole_code	varchar2(15 char)	role 'sas' means SA
cellphone	varchar2(30 char)	Mobile number
verification_code	varchar2(15 char)	The latest SMS code
<pre> SELECT e.usr_name homer_Id, e.cellphone cellphone, e.emp_status status FROM OWNER_INT.vh_hom_employee E where e.BANKROLE_CODE ='sas' and id_emp = param_phone_number </pre>		

3.7.1.5. 0.1.1.3 SA Register Service Specification

RegisterService : sendVerifiCode2SA(Long HomerID)

{

LeadInnerService: prepareVerificationCode(Long HomerID)

LeadInnerService: sendSMS2Client(int number, String message)

Refer to 2.7.14

}

3.7.1.6. REQ2_SA can view their assigned leads in active lead

3.7.1.7. 0.1.1.1 Get the global configuration setting info. when SA login successfully.

Refer to 2.7.15

I <http://hccdomain/lead-gateway/api/ccs>

CentralizedCfgInfoService: getAppInitInfo()

{

Note: for the 1st time each day, need to call "createSABehavior",

I <http://hccdomain/lead-gateway/api/sas/fstsa>

SADetailService: createSABehavior (Long HomerID)

Refer to 2.7.2.4

SADetailService: checkPersistSASession ()

// Tomcat sessions.ser

}

Response of css:

{

"LeadMaxNum ":"500",

"LeadAvailNum ":"100",

.....

(TBC)

}

Note: Maximum number & Maximum No of active need to be configured at APP client when SA Login successfully.

3.7.1.8. 0.1.1.2 Get the activity lead

I <http://hccdomain/lead-gateway/api/lds/actl>

LeadDetailService : getSAAssignedLeads(Long HomerID)

{

Note: Update t_lead_emp stauts='to call' and below colomns when sa open app

LeadDetailService: updateLeadFirstCallTime(List <Long LeadID>)

Refer to 2.7.2.5

Note: when the leads = 'new', need to call "updateLeadToCall"

LeadDetailService: updateLeadToCall(List <Long LeadID>)

```
}
```

Response: (TBC) of actl

```
{
  "lead": [
    {
      "lead_id": "1012134141231",
      "lead_date": "20161129000001",
      ...
    },
    {
      "lead_id": "1012134141232",
      "lead_date": "20161129000002",
      ...
    }
  ]
}
```

column	data type	description
status	varchar(10)	New /To Call /Meeting/Finished
Accept_time	Datetime	First to_call date time
To_call_times	Number	0,1,2,3
edate	Datetime	Date modify time

3.7.1.9. 0.1.1.3 Get the archive lead

I <http://hccdomain/lead-gateway/api/lds/arcl>

LeadDetailService : getSAArchiveLeads(Long HomerID)

Response: (TBC) of arcl

```
{
  "lead": [
    {
      "lead_id": "1012134141231",
      "tap": "Called"
      "lead_date": "20161129000001",

```



```

...
},
{
  "lead_id": "1012134141232",
  "tap": "Deal"
  "lead_date": "20161129000002",
  ...
}
]
}

```

Note: "tap" define as the following String:

Called : First_calling_time not null

Meeting: Call_result = Meeting

Not Contact: First_calling_time is null

Deal : Contract_number not null

3.7.1.10. 0.1.1.4 Create SA behavior for tracking when the 1st time per day.

Insert t_sa_behavior login data for the SA by 1 day

```

{
  *SADetailService: createSABehavior (Long HomerID)

```

Note: for the 1st time each day, need to call "createSABehavior",

```

}

```

column	data type	description
Edate	datetime	Modify date time

3.7.1.11. 0.1.1.5 Update Lead Status as "To call" when the 1st time per day.

Update t_lead_emp stauts ,

```

{
  *LeadDetailService: updateLeadFirstCallTime(Long LeadID)

```

Note: Update t_lead_emp stauts='to call' and below colomns when sa open app

}

column	data type	description
First_calling_time	dateTime	First calling time when SA click call button on APP
edate	Datetime	Date modify time

3.7.1.12. REQ3_SA could make a call to client without dialing

Update t_sa_behavior, t_lead_emp

LeadDetailService: updateCallCust(Long HomerID, Long LeadID)

{

*LeadDetailService: updateLeadFirstCallTime(Long LeadID)

Refer to 2.7.2.5

SADetailService: updateSABehavior(Long HomerID)

Refer to 2.7.4.2

}

3.7.1.13. REQ4_ SA can input 'call result' after contacting client.

LeadDetailService: updateLeadCall(Long LeadID, int status, String str, Date d) return void

{

LeadDetailService: updateLeadCallResult(Long LeadID, int status) return void

LeadDetailService: updateLeadCallComment(Long LeadID, String str) return void

LeadDetailService: updateLeadMeetTime(Long LeadID, Date d) return void

SADetailService: updateSABehavior(Long HomerID)

}

3.7.1.14. 0.1.1.1 update t_lead_emp below columns for call result,

LeadDetailService: updateLeadCallResult(Long LeadID, int status)

LeadDetailService: updateLeadCallComment(Long LeadID, String str)

LeadDetailService: updateLeadMeetTime(Long LeadID, Date d)

column	data type	description
status	varchar(10)	New /To Call /Meeting/Finished
call_result	varchar(10)	1. If call result = call again (No contact/ No time/ No agreement on meeting. Lead status remains in 'To call'. 2. If 'To call' - 'To call' status happens over X times(Centralized parameter in Global Setting specify by product type (WCL, XCL)), Lead status changes to be 'Finished'. 3. If call result =no interest (No interest/Rejects meeting on POS). Lead status changes to be 'Finished'. 4. If call result = Meeting, Lead status changes to be 'Meeting'.
To_call_times	Number	0,1,2,3
comment	varchar(100)	comment
M_c_time	datetime	meeting time/call time
edate	Datetime	Date modify time

3.7.1.15. 0.1.1.2 Update t_sa_behavior

SADetailService: updateSABehavior(Long HomerID)

column	data type	description
Edate	datetime	Modify date time

3.7.1.16. REQ5_ SA can input 'visit result' after meeting client.

LeadDetailService: updateLeadVisitResult(Long LeadID, int status, Date d) return void

```
{  
    updateLeadCallResult (Long LeadID, int status)  
    updateLeadCallDate(Long LeadID, d)
```

SADetailService: updateSABehavior(Long HomerID) return void

Refer to 2.7.4.2

```
}
```

3.7.1.17. 0.1.1.1 Update for visit result

updateLeadCallResult (Long LeadID, int status)

updateLeadCallDate(Long LeadID, d)

column	data type	description
status	varchar(10)	New /To Call /Meeting/Finished
Meeting _result	varchar(10)	1. If visit result = No interest, Lead status changes to be 'Finished'. 2. If visit result = Re-contacting, Lead status changes to be 'To call'.
To_call_times	Number	0,1,2,3
comment	varchar(100)	comment
M_c_time	datetime	meeting time/call time
edate	Datetime	Date modify time

3.7.1.18. REQ6_ SA can view Lead in archive lead

Refer to REQ2

3.7.1.19. REQ7_ Event in APP can be synchronized to Mobile Calendar

LeadDetailService: updateLeadDate (int status) return void

```
{  
updateLeadCallResult (status) if "to-call, counter ++"  
}
```

3.7.1.20. 0.1.1.1 Update status for the call.

updateLeadCallResult()

3.7.1.21. 0.1.1.2 Get CentralizedCfgInfoService should be completed when login.

CentralizedCfgInfoService: getAppInitInfo() return

Refer to 2.7.15

```
{  
CentralizedCfgInfoService: getNextCallDateLimitation() return int date  
}
```

3.7.1.22. REQ8_ Overnight Job Check (The job will be executed in parallel)

#	JOB db	frequency	type	Description
1	sa_assign_job	every 3 mins	9:00~18:00	<ol style="list-style-type: none"> 1. This job only process re-assign data, new lead will be calculate proper SA when homer real time synchronized 2. scan t_lead_emp where status=0(not_assigned), 3. get the proper SA according to assign logic 4. update id_emp , assign_time, status='1'(new) 5. insert t_lead_notification table the id_homer and id_lead, t_lead_notification .status='1'
2	meeting_to_call_job	0 am	daily	<ol style="list-style-type: none"> 1. select data from t_lead_emp.status='meeting' <p>where m_c_time is yesterday and call_result is 0(default value)</p> <ol style="list-style-type: none"> 1. update status='to_call' and To_call_times, edate <p>if to_call times >parameter in setting table, then status='Finished', status_remark='to call times overload'</p>
3	clean_finished_lead_job	0:30 am	daily	<ol style="list-style-type: none"> 1. select data from t_lead_emp where contract_generated= 0 and status=new/to_call/meeting 2. check lead's contract number is generated or not 3. update status='finished' and status_remark='1.contract generated', edate, contract_generated= 1

4	clean_and_clone_inactive_lead_job	1:pm	daily	<ol style="list-style-type: none"> 1. select id_emp from t_lead_emp where status=new/to_call/meeting 2. if owner_int.int_homer_employee.status='n' 3. update t_lead_emp.lead_status='finished' and status_remark='active lead check', edate 4. insert same id_lead record in t_lead_emp table by clone the old one, status='new', id_emp is empty and related columns
---	-----------------------------------	------	-------	---

3.7.1.23. REQ9_ Active Lead Check

Real time interface will do the duplicate lead check and re-assign

3.7.1.24. REQ10_SA Assign Logic/Re-assign logic

N/A refer 3.2.1.2

LeadDetailService : getSAAssignedLeads(Long HomerID) return List<Bean(Lead)>

- SA assign logic

1. Example:

$$\sum_{all\ variables} Con * IF(Var Ope Trs = True then 1 else 0) * Poi$$

- Con_Response_new_to_call_last_30 := 1
- Var_Response_new_to_call_last_30 := 85
- Ope_Response_new_to_call_last_30 := "<"
- Trs_Response_new_to_call_last_30 := 120
- Poi_Response_new_to_call_last_30 := 5

1. Calculation: 1*IF(85<120,1,0)*5 (result = 5)

Assign logic will check the origin SA who not accepted the lead, logic will pass him and assign to the next proper SA.

parameters should be followed

Maximum No of leads within one calendar month WCL
Maximum No of active leads WCL

1. Lead type – pre-calculated automatically

a. Type_lead

- i. Values in ('CLX', 'WCL')

1. Variables – pre-calculated automatically

a. Var_Hang_up_triggered

- i. If SA is not active then 1 else 0

- owner_int.vh_hom_employee.emp_status=a --active

1. Var_App_opened_today

- i. If App was opened today after 6:00 then 1 else 0

t_sa_behavior.edate>today 6:00

1. Var_Age_30D

- i. Difference between first time activation as SA in Homer and sysdate

- ii. If <30D then 0 else 1

first time activation as SA in Homer to be confirmed by DWH

It can be replaced by first contract created datetime

1. Var_Age_60D

- i. Difference between first time activation as SA in Homer and sysdate

- ii. If <60D then 0 else 1

1. Var_Leads_num_new

- i. Actual (real-time) number of leads in status "new"

count of t_lead_emp.status='new'

1. Var_Leads_num_to_call

- i. Actual (real-time) number of leads in status "to call"

count of t_lead_emp.status='to call'

1. Var_Prob_application_4D_last_30

- i. Denominator: 30 most recent leads (but older than 4D)

- ii. Nominator: leads from denominator turned into application within 4D since sending the lead to SA

count of leads which contract generated for latest 30 leads in 4 days

t_lead_emp.status='Finished' and

status_remark='contract generated' and

edate in 4 days

and rownum<=30

1. Var_Response_new_to_call_last_30

i. time difference for last 30 leads between :

1. sending the leads to SA (lead status: new)
2. accepting the lead by SA (lead status: to call)

ii. use only leads where the 2nd dtime is available

the time between t_lead_emp.Assign_time and accept_time

and rownum<=30

the average of the times

1. Var_Response_new_first_calling_last_30

i. time difference for last 30 leads between :

1. sending the leads to SA (lead status: new)
2. first calling to the client – based data from app

ii. use only leads where the 2nd dtime is available

the time between t_lead_emp.Assign_time and First_calling_time

and rownum<=30

the average of the times

1. Var_Response_new_feedback_last_30

i. time difference for last 30 leads between :

1. sending the leads to SA (lead status: new)
2. recording feedback from client (lead status: appointment, no interest, call again (2nd to call))

ii. use only leads where the 2nd dtime is available

the time between t_lead_emp.Assign_time and Feedback_time

and rownum<=30

the average of the times

1. Var_POSL_units_last_30D

i. Number of POSL contracts in last 30D

POSL contracts to be confirmed by DWH

1. Var_lead_prev_not_accepted

i. Binary variable

ii. 1 = lead was sent to this SA and it wasn't accepted in the last 24H, else 0

t_lead_emp.status='Finished' and Status_remark=' 2.not accept'

1. Var_rand

i. Rand number from interval (0,1)

random number between 0 and 1, number in 8 digits

- 1. Var_last_application_on_POS
 - i. Binary variable
 - ii. 1 = SA was the last one who did any application (any product) on the selected POS, else 0

application (any product) on the selected POS to be confirmed by DWH

- 1. Var_WCL_privilege
 - i. Binary variable
 - ii. 1=SA is allowed to do WCL applications

SA is allowed to do WCL applications to be confirmed by Kate.zhou

- 1. Var_WCL_Centralized_Team
 - i. Binary variable
 - ii. 1=WCL Centralized Team

Definition for Centralized Team:

- 1. SA whose Homer ID starts with 5 or 1 and bind to WCL Branch POS
- 2. DSM(WCL mentor) whose Homer ID starts with 5 and bind to WCL Branch POS

owner_int.vh_hom_employee.usr_name starts with 5 or 1

bind to WCL branch pos to be confirmed by DWH

- 1. Var _Leads_Number_MTD (For WCL lead)
 - i. Number of Leads SA have already received till now within current calendar month

t_lead_emp.lead_type=WCL

and assign_time in current month

- 1. default data in table t_strategy_setting, setting parameter table for SA assign logic.

Sale business user will do the configuration.

- 1. Job of database

#	JOB db	frequency	type	Description
---	--------	-----------	------	-------------

1	clean_and_clone_new_lead_job WCL	every 1 hour	9am-8pm (according to param setting)	<p>1. scan t_lead_emp where status='new' and</p> <p>time between Assign_time and sysdate more than X hour(according to param setting)</p> <p>1. update status='Finished', status_remark='6.new time out', and edate</p> <p>2. insert same id_lead record to t_lead_emp, status='new', id_homer is empty, other columns like a new record</p>
2	clean_and_clone_new_lead_job XCL	every 1 hour	9am-8pm (according to param setting)	<p>1. scan t_lead_emp where status='new' and</p> <p>time between Assign_time and sysdate more than X hour(according to param setting),</p> <p>1. update status='Finished', status_remark='6.new time out', and edate</p> <p>2. insert same id_lead record to t_lead_emp, status='new', id_homer is empty, other columns like a new record</p>

3.	clean_and_clone_toCall_ lead_job	2:30 am	Daily	1. scan t_lead_emp where status='To call' and call_result=0(default value), between assign_time and sysdate more than 24 hours 2. update status='Finished', status_remark='5.to call time out', edate 3. insert same id_lead record to t_lead_emp, status='new', id_homer is empty, other columns like a new record
----	-------------------------------------	---------	-------	---

3.7.1.25. REQ11_Send SMS to Client automatically from LDS Gateway base on 3.7.1.12 homer side done

1. read from sms template db, sending same SMS as pos inventory did

NAME	TEMP_CONTENT_ZH
XCL_To_CFC_client	尊敬的客户(0)您好, 建信现金贷办理地点为(1),如有疑问, 请咨询销售热线400-027-1273!祝您生活愉快!
TS_SMS_WCL2Client	尊敬的客户(0), 建信现金贷办理地点为(1), 申请建信贷需要准备的资料包括身份证原件和篇二证明文件(包括社保卡、驾照、银行卡、户口本、工卡等其他辅助资料), 如有疑问请致电400-027-1273.祝您工作、生活愉快!
TS_SMS_WCL_单位证明内容	尊敬的客户(0), 单位证明内容包括:姓名、证件号码、入职时间、单位名称、部门、具体的职位、收入(单位证明日期不能超过10天的有效期,公章可以是财务章、人事章或后勤章),如有疑问请致电400-027-1273.祝您工作、生活愉快!

2. Pos inventory GUI amend

Remove the function of the sending SMS to client/SA/DSM for XCL/WCL.

According to the parameter.

Disable the function of POS Inventory for sending SMS message to DSM/SA/Client manually	Number	0: not disable 1: disable
---	--------	------------------------------

To be continue.

Depend on REQ12

N/A refer 3.7.1.16

3.7.1.26. REQ12_Add Real Time Message between Homer and LDS Gateway

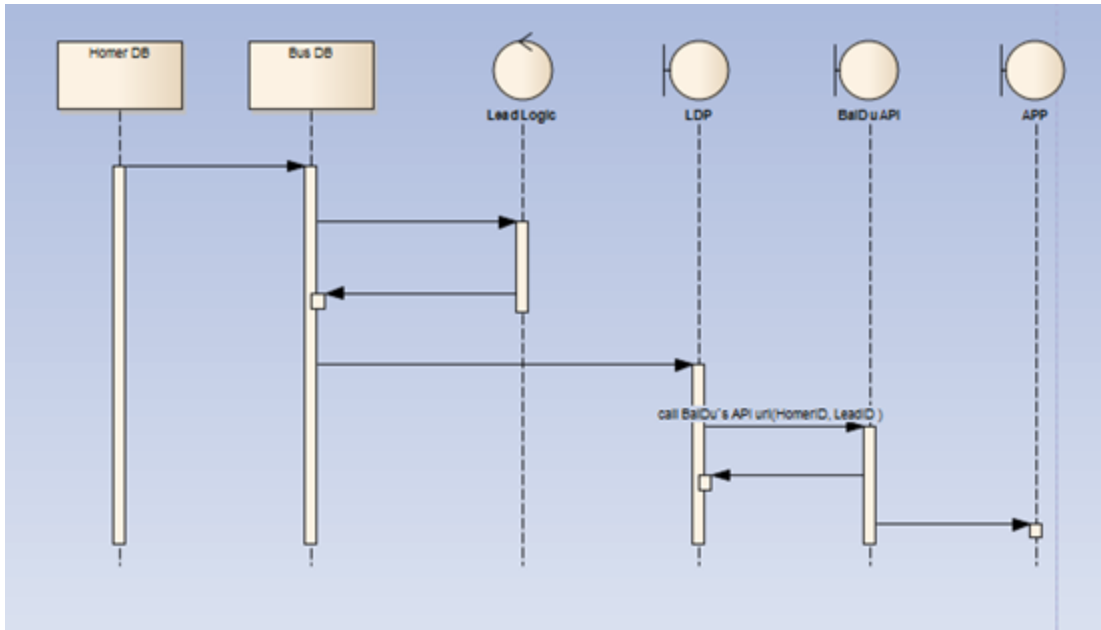
wait till Homer side done, no design currently

N/A refer 3.7.1.16

3.7.1.27. REQ13_Push Lead Notification to Selected SA's Mobile

To be continue.

LeadPushService: HomerID, LeadID + call BaiDu's API url



#	JOB java	frequency	type	Description
1	Push_notification_job	every 5 mins		<ol style="list-style-type: none"> 1. scan t_lead_notification.status=1 2. push by third party i.e. Baidu push tool 3. update t_lead_notification.status=2

3.7.2. 0.1.1 (Non-scope function) LDP send SMS to client

LeadInnerService:

sendSMS2Client(int number, String msg) return String msgID , String result

3.7.3. 0.1.2 (Non-scope function) Get global Configuration Information

Note: suggest to call the CentralizedCfgInfoService when the SA login APP successfully, and then cache the data in the APP local, in order to reduce unnecessary service call

I <http://hccdomain/lead-gateway/api/ccs>

CentralizedCfgInfoService: getAppInitInfo()

Response of css:

```
{  
"LeadMaxNum ":"500",  
"LeadAvailNum ":"100",  
"ArchiveDateLimitation":"3",  
"ActiveDateLimitation":"7",  
"NextCallDateLimitation":"3"  
(TBC)  
}
```

Note: make sure the parameter has been used in the proper spot, double check it.

Config the default value of table t_centralized_parameter_setting

3.8. Reporting

3.9. Proposed Tests

The following table describes proposed tests that are specific to this issue. Standard tests are not mentioned here.

#	Test	Description
1.		

4. Resource Plan

4.1. Resource Plan

#	Tasks	Resource

4.2. Project Plan

#	Tasks	Start Date	End Date

More details, please refer to the following latest SD doc:

[SD_Mobile APP of XCL and WCL Lead Management - v2.1.doc](#)