Informix Operational Guide SOP

Informix Operational Guide

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Intended Audience

The document is relevant to following teams.

- TSSC ADBA Team
- ADBA Team Germany

Source Documents Reference

S.NO	**Title**	**Link**
1.	Confluence	**Informix Database - TIDE_ADBA - Vodafone Global Confluence**
2.	IBM	**IBM Informix V14.10 documentation - IBM Documentation**

Project: Epos Informix

1. Introduction

This document should give a short introduction to the RDBMS Informix Dynamic Server (Workgroup Edition). Important things regarding architecture, connectivity and often used commands and applications are described.

Beside this technical view the implementation in the workflow as part of the mobile business cases at Vodafone is also described.

Tramo is part of the Vodafone Germany's activation channel for all mobile phone order types. All Vodafone shops (branches), all partner agencies and all retailers distributing Vodafone products process their orders via the so-called ePOS client. (ePOS: = electronic point of sale)

Here - simplified - the chain of involved systems :

CSM60	Epos-Client	KIAS	VAS/Tramo	Epos-Server

The Tramo environment was introduced in 1999 together with the legacy system KIAS.

2. Topology

2.1. Oracle Topology

The OL1 and OL3 databases are involved in the order flow. From EPOS, order is passes to VAS(Vodafone Activate Server) and from embedded Informix instances they were picked up by daemons belonging to KIAS and are passed to OL3 and OL1. Complete Oracle topology is not in scope of this document.

2.2. Informix Topology

We have four production database instances running on cluster servers adetrmdb1 and adetrmdb2 and all are critical, whereas pre-prod instances are on server adettm1s, On server adevas3s we have 2 important instances one is for BSM monitoring and other one is for blob counter tool: which gives information about amount of order types.

rataktp1_vm:
==========
arsoc@rataktp1_vm
tochgreq@rataktp1_vm
erwerb@rataktp1_vm
tochgval@rataktp1_vm
misc@rataktp1_vm
subvent@rataktp1_vm
subventmulti@rataktp1_vm

sysadmin@rataktp1_vm
sysmaster@rataktp1_vm
sysuser@rataktp1_vm
sysutils@rataktp1_vm

rataktp2_vm:
==========
aktiv_imp@rataktp2_vm
port_aktiv@rataktp2_vm
tausch@rataktp2_vm
wechsel@rataktp2_vm

sysadmin@rataktp2_vm
sysmaster@rataktp2_vm
sysuser@rataktp2_vm
sysutils@rataktp2_vm

rataktp4_vm:
==========
rueckmeldung@rataktp4_vm
benutzer@rataktp4_vm

sysadmin@rataktp4_vm
sysmaster@rataktp4_vm
sysuser@rataktp4_vm
sysutils@rataktp4_vm

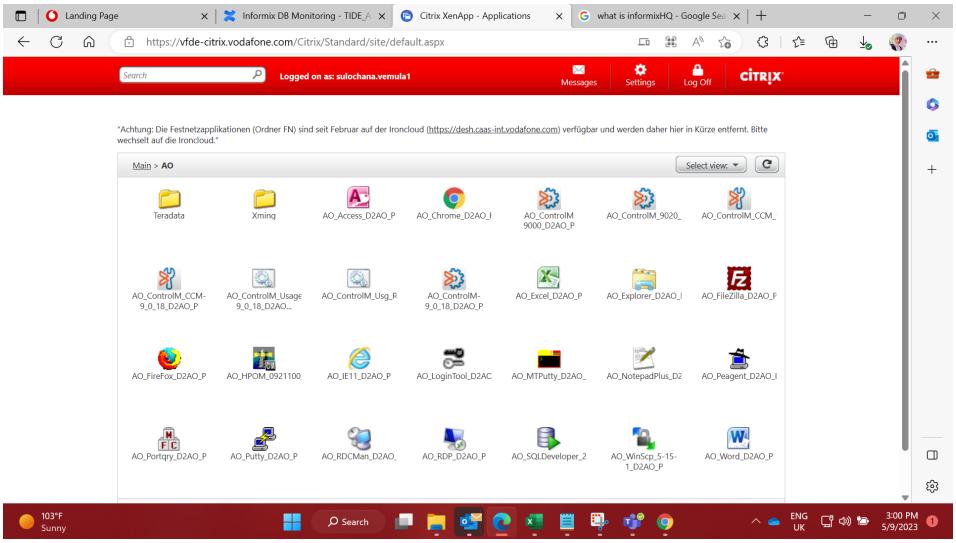
ratcalp2_vm:
==========
debitchg@ratcalp2_vm
port_reg@ratcalp2_vm
reg@ratcalp2_vm
reg_imp@ratcalp2_vm

sysadmin@ratcalp2_vm
sysmaster@ratcalp2_vm
sysuser@ratcalp2_vm
sysutils@ratcalp2_vm

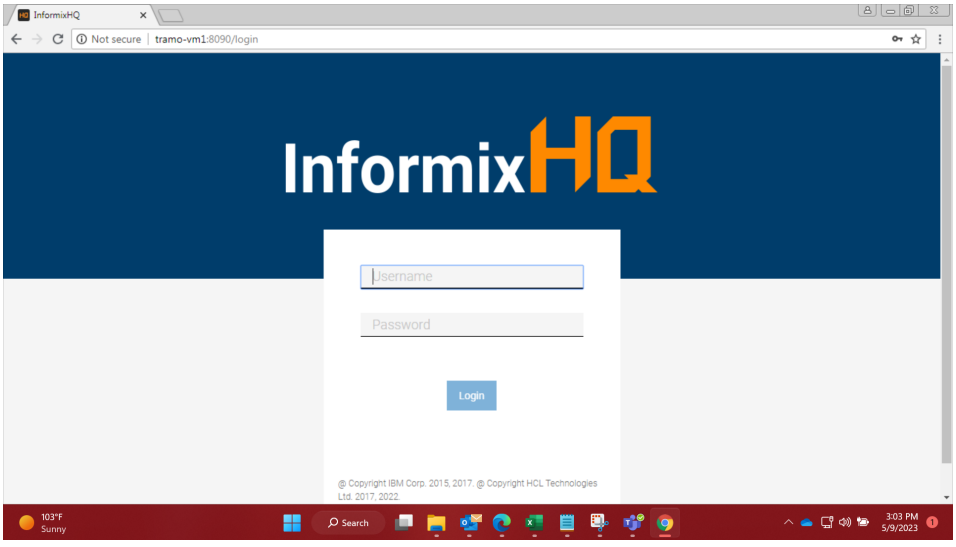
2.3. Monitoring

2.3.1. InformixHQ (Monitoring Tool)

Step1: Login into the link by using your DE credentials: Citrix XenApp - Applications (vodafone.com)



Step2: Open any of the Web Browser & Enter the following link: http://tramo-vm1:8090/login

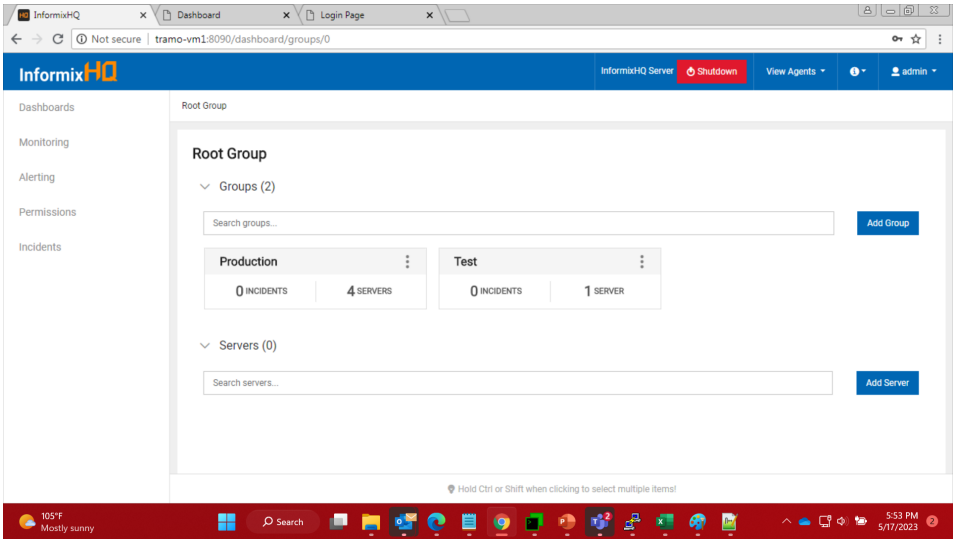


Step3: Login into the tool by using username & password.

Username: informix

Password: Informix@1234

Step4: Here is the Web Console of InformixHQ tool.



For complete information of monitoring the InformixHQ, please visit below link:

Informix HQ Monitoring - TIDE_ADBA - Vodafone Global Confluence

For Monitoring the Particular instance in InformixHQ, please visit below link:

Instance Monitoring in InformixHQ - TIDE_ADBA - Vodafone Global Confluence

2.3.2. Informix DB Monitoring

We will be monitoring Informix databases trough below link with complete commands:

Informix DB Monitoring - TIDE_ADBA - Vodafone Global Confluence

Basic Monitoring Commands - TIDE_ADBA - Vodafone Global Confluence

3. Informix Operational Aspects

3.1. Operational Concept

We will be handling L1 level tasks listed below :

L1 Task:

- **Health check**

- Disk space check
- Session utilization check
- Server load check
- Instance & Logical log Backup check for success & time taken
- Logical log generation frequency & backup check

- Oninit process count check
- Kill session
- Ticket handling
- Hotline
    - **House Keeping task**
- Flush memory stats (onstat –z)
- Purging of important log file : online.log, batact.log
- Table fragmentation check
    - **Passport advantage : Request progress monitoring (https://www.ibm.com/software/passportadvantage/pao_customer.html)**

3.2. Informix Support

IBM provides support for Informix under **https://www.ibm.com/account/de/de/**

Please refer below document for creating IBM Informix support account.

For creating the care, please refer below page:

How To Open Case - TIDE_ADBA - Vodafone Global Confluence

3.3. Vodafone Internal Support

Any issue related to Informix will be reported by means of an incident ticket to TIMD, TTWOS categories are not yet finalized. (We will be adding information regarding this as we agree to all the process)

We can also open a case to IBM passport advantage portal as mentioned in 3.2(yet to finalize). (OPEN)

3.4. Project Related Access

We are having all the project related accesses.

1. Informix Login:

From sylt3

ssh <Your_LDAP_ID>@adetrmdb1 OR adetrmdb2 (Check Active Host & Connect)

Note: ADBM UNIX user has no access on server

2. Copy switch file from /opt/informix to your home directory

cd /opt/informix

Files:

switch_rataktp1_vm.sh
switch_rataktp2_vm.sh
switch_rataktp4_vm.sh
switch_ratcalp2_vm.sh
switch_rataktp6_vm.sh

3. Now switch to desired instance as below

1. Whenever we can login into server (**ssh informix@adetrmdb1)** we need to do the **"bash"**

```
adbm@de0922yr:~ $ ssh informix@adetrmdb1
Last login: Tue May 16 10:27:38 2023 from 198.18.108.244
Oracle Corporation      SunOS 5.11      11.4    March 2021
You have mail.
informix@adetrmdb1:~$ aa
-ksh: aa: not found
informix@adetrmdb1:~$ bash
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix> ss
rataktp1_vm
informix@adetrmdb1:/opt/informix>
```

2. If we want to Switch from one Instance to another, we can use below command.

```
informix@adetrmdb1:/opt/informix> ss
rataktp1_vm
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix> . ./switch_rataktp4_vm.sh
informix@adetrmdb1:/opt/informix> ss
rataktp4_vm
informix@adetrmdb1:/opt/informix>
```

3.5. To Start/Stop Informix Services

Please note that we need to do these tasks in co-ordination with Application Team so communicate with them before and after each task. Here we have just mentioned ADBA tasks. Refer document for this Section from section 5 (SOP-Informix -START-STOP-new.DOCX) for when to co-ordinate Application Team.

While stopping Informix we need to disable Informix monitoring by stopping all subscripts and the main process

Decide whether it is necessary to make a full backup for all instances:

1. Stop the Informix Database Servers

Switch to every instance and stop the instance:

1a. Switch to instance rataktp1_vm like below:

```
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix>
informix@adetrmdb1:/opt/informix>
informix@adetrmdb1:/opt/informix> . ./switch_rataktp1_vm.sh
informix@adetrmdb1:/opt/informix> ss
rataktp1_vm
informix@adetrmdb1:/opt/informix>
```

. ./stop_rataktp4.sh

1b. Switch to instance rataktp2_vm like below:

```
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix> . ./switch_rataktp2_vm.sh
informix@adetrmdb1:/opt/informix> ss
rataktp2_vm
informix@adetrmdb1:/opt/informix>
```

. ./stop_rataktp2.sh

1c. Switch to instance rataktp4_vm like below:

```
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix> . ./switch_rataktp4_vm.sh
informix@adetrmdb1:/opt/informix> ss
rataktp4_vm
informix@adetrmdb1:/opt/informix>
```

. ./stop_ratcalp2.sh

1d. Switch to instance ratcalp2_vm like below:

```
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix> . ./switch_ratcalp2_vm.sh
informix@adetrmdb1:/opt/informix> ss
ratcalp2_vm
informix@adetrmdb1:/opt/informix>
```

. ./stop_rataktp1.sh

Remark:

If the shutdown of one or more Informix instances will not work properly, the procedure ‘onclean’ has to be called (but this should not happen). Refer document for ‘onclean’ from section 5 (onclean-utility.docx).

Deactivate all crontab jobs for user tramo (application task) and informix on adetrmdb2 (OR) adetrmdb1

1. Start Informix Services
2. Activate all crontab jobs for user tramo.(Application Task)
3. Verify all necessary devices
4. As user Informix in $HOME directory start the Informix Database Servers

Switch to each instance before starting the Instance (do it one by one)

1a. Switch to instance rataktp1_vm like below:

```
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix>
informix@adetrmdb1:/opt/informix>
informix@adetrmdb1:/opt/informix> . ./switch_rataktp1_vm.sh
informix@adetrmdb1:/opt/informix> ss
rataktp1_vm
informix@adetrmdb1:/opt/informix>
```

. ./start_rataktp1.sh ==========> do this rataktp1_vm

1b. Switch to instance rataktp2_vm like below:

```
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix> . ./switch_rataktp2_vm.sh
informix@adetrmdb1:/opt/informix> ss
rataktp2_vm
informix@adetrmdb1:/opt/informix>
```

. ./start_rataktp2.sh ==========> do this rataktp2_vm

1c. Switch to instance rataktp4_vm like below:

```
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix> . ./switch_rataktp4_vm.sh
informix@adetrmdb1:/opt/informix> ss
rataktp4_vm
informix@adetrmdb1:/opt/informix>
```

. ./start_rataktp4.sh ==========> do this rataktp4_vm

1d. Switch to instance ratcalp2_vm like below:

```
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix> . ./switch_ratcalp2_vm.sh
informix@adetrmdb1:/opt/informix> ss
ratcalp2_vm
informix@adetrmdb1:/opt/informix>
```

. ./start_ratcalp2.sh ==========> do this ratcalp2_vm

Take level 0 backup

Switch to each instance before taking backup (do it one by one)

1a. Switch to instance rataktp1_vm like below:

```
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix>
informix@adetrmdb1:/opt/informix>
informix@adetrmdb1:/opt/informix> . ./switch_rataktp1_vm.sh
informix@adetrmdb1:/opt/informix> ss
rataktp1_vm
informix@adetrmdb1:/opt/informix>
```

onbar -b -L 0 ==========> do this rataktp1_vm

1b. Switch to instance rataktp2_vm like below:

```
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix> . ./switch_rataktp2_vm.sh
informix@adetrmdb1:/opt/informix> ss
rataktp2_vm
informix@adetrmdb1:/opt/informix>
```

onbar -b -L 0 ==========> do this rataktp2_vm

1c. Switch to instance rataktp4_vm like below:

```
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix> . ./switch_rataktp4_vm.sh
informix@adetrmdb1:/opt/informix> ss
rataktp4_vm
informix@adetrmdb1:/opt/informix>
```

onbar -b -L 0 ==========> do this rataktp4_vm

1d. Switch to instance ratcalp2_vm like below:

```
informix@adetrmdb1:/opt/informix> aa
. ./switch_rataktp1_vm.sh == rataktp1 PROD INSTANCE
. ./switch_rataktp2_vm.sh == rataktp2 PROD INSTANCE
. ./switch_rataktp4_vm.sh == rataktp4 PROD INSTANCE
. ./switch_ratcalp2_vm.sh == ratcalp2 PROD INSTANCE
. ./switch_adetrtest_vm.sh == adetrtest TEST
informix@adetrmdb1:/opt/informix> . ./switch_ratcalp2_vm.sh
informix@adetrmdb1:/opt/informix> ss
ratcalp2_vm
informix@adetrmdb1:/opt/informix>
```

onbar -b -L 0 ==========> do this ratcalp2_vm

cat /opt/Informix/IDS/12.10/tmp/bar_act1.log | grep "Archive on rootdbs, datadbs1, datadbs2 Completed (Requested Level 0)"

(with actual timestamp)

1. Activate all crontab jobs for user Informix
2. Check if all activate daemons are up and running

onstat -
onstat -D
onstat -l
onstat -m

1. Enable Informix monitoring from TSSC-DBA-Team

Starting all subscripts and the main process

4. Project and Contacts

	Contact Numbers	**Email Id**
Oncall and Hotline Details ePOS Hotline ePOS OnCall TSSC OnCall	+492115334959 +491737257322 +919168667516	
EPOS Team E-Mail Address EPOS Team's TTWOS Group Group leader TIMP	EPOS_APPL	DL-DE TISF_ePos_Support [ZV] - MXL <TISF-ePos-Support-ZV.de@vodafone.com>

TIMP Team Members Group leader TIMP EPOS SO	Stefan Jörg Siering Hans-Joachim Aberle Jürgen Grosch Jörg Franken Alexander Hartmann Martin Jordan Dieter Moulin Jürgen Grosch	stefan.siering@vodafone.com hans-joachim.aberle@vodafone.com juergen.grosch@vodafone.com joerg.franken@vodafone.com alexander.hartmann@vodafone.com martin.jordan@vodafone.com dieter.moulin@vodafone.com Juergen.Grosch@vodafone.com
Group leader TSSC Tem leader TSSC	+91 9168693114 +91 9764026897 +91 9689697677 +91 7391042583 +91 7391042425 +91 7391098180 +91 9168604066 +91 9168663341	Kaustubh.Deoghare01@Vodafone.com Sagar.Bodala3@Vodafone.com Vijayant.Prakash1@Vodafone.com Iqbal.Ahmed5@Vodafone.com Prashant.Kuruvilla1@Vodafone.com Shweta.Dandekar1@Vodafone.com Jyotsna.Wankhade1@Vodafone.com Neha.Kale01@vodafone.com
Contact for Vodafone Group / VTIS Service Desk	+492102972575	
Backup Team DL Contact person	DL-VISPL-BCK-COP Dinesh Sakhuja Megha Prapanna	DL-INFRA-BACKUP-TSSC <DL-INFRA-BACKUP-TSSC@vodafone.com>

5. References

5.1. Informix@Tramo

Please refer below document for basic architecture and commands.

5.2. Application Flow

Please find below the document for Application flow and involved systems.

5.3. Migration Task

Refer below text for migration task.

5.4. SOP-Informix -START-STOP

5.5. Onclean Utility