



WWOPS Systems: *Ongoing Reliability Test (ORT) Report Template*

Form (Spreadsheet)

Document Number: 913-3532

Revision: 08

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Template No: 7051300 Revision: 02

Instructions

- 1 Raise any support requirements through your Oracle Product Engineer
- 2 Print the following sheets:
 - Ongoing Reliability Test (ORT) Report Plot
 - ORT Test Report CPAS Data
- 3 The only section that requires you to input data is the **Product Data** sheet.
- 4 On the Product Data sheet, you must provide the following data:
 - a. Product and manufacturer:
 - **Vendor name** – The name of the manufacturer (and location, if necessary).
 - **Product name** – Oracle product name
 - **Target MTBF** – This is provided by Oracle: it is a weighted average of the MTBFs of the platform configurations on test. Data is derived from the MTBFtool database. Refer to *WWOPS Systems: Ongoing Reliability Test (ORT) Sizing Template*, 913-3549, for further details on defining the Target MTBF. This must be a positive, non-zero number, not text.
 - **Achieved POH** – This is the total number of machine hours in ORT since last reset. This must be a positive number, not text. This number must not be less than the highest failure accumulated test time.
 - **Systems on test** – This is the number of systems currently running in ORT.
 - b. **Last reset information** - This data must be updated (with date, achieved POH, and an accept/reject decision) at each ORT reset.
 - c. **Waiver** – the NCAT number for any active waivers or deviations applicable to this product.
 - d. **Oracle Owner** – The Oracle product engineer responsible for the product.
 - e. **Accumulated ORT results** – Increment the accept or reject total at each ORT reset.
 - f. **Current ORT run** – enter the start date of the run.
 - **Test run name** – in the form product name run number (number of ORT runs in product's life cycle). For example, if Oracle's internal product name was Daktari and it was the third ORT run on this product, the test run name would be Daktari_run_3.
 - **Deviation** – the NCAT number of any deviation documents applicable to this test run.

- **Weighting** – This is the number by which the MTBF Target is multiplied to produce the total required test time for each quarter, as defined in *WWOPS Systems: Ongoing Reliability Testing (ORT) Policy*, 914-1736. Typically this number equals 2.4. This must be a positive, non-zero number, not text.

5 On the Product Data sheet, provide **full** failure information data for each failure seen in ORT:

NOTE: Enter chargeable failures in rows 12 to 19 and the non-chargeable failures in rows 24 to 31.

- **Accumulated test time** - The total number of machine hours accumulated between last reset and the observed failure. This must be a positive number.

NOTE: This number cannot be omitted or the failure will not be recorded on the ORT plot.

NOTE: This is not the accumulated hours since last failure.

NOTE: Entering data in this field turns on the visibility on the ORT_Plot form.

- **Failure CPAS number** – Raise a Oracle NCAT for each individual ORT failure. This is the reference number for any chargeable failure and must be provided here.
- **Part number** – The Oracle Part Number of the failed part.
- **Part description** – The Oracle Part Name of the failed part.
- **System S/N** – The serial number of the system which had the failure.
- **Part S/N** – The serial number of the failed FRU from the system.
- **Fail date** – The date (dd/mm/yy) of the failure.
- **Time to Fail** – The time between the start of the test on the failing machine, and the first instance of the chargeable failure occurring.
- **Site/Owner** – The responsible site and engineer for completing the root cause/corrective action
- **Summary** – Short description of the status of NCAT/failure analysis.
- **Reliability/Latent/TBD failure:** Enter either Reliability, Latent, or TBD, determined as follows:
Reliability – The failure was due to a time-based, reliability failure mechanism. When the failure finally occurred it was easily found in test.

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Latent – The failure mode was detected during ORT but the manufacturing test process prior to ORT should have detected it. The previous test process did not or was not capable of finding the failure.

TBD – The failure type still has to be determined.

On the Product Data sheet, in rows 37 onwards, enter **full** failure information data as above for each fail seen in ORT
on previous plots.

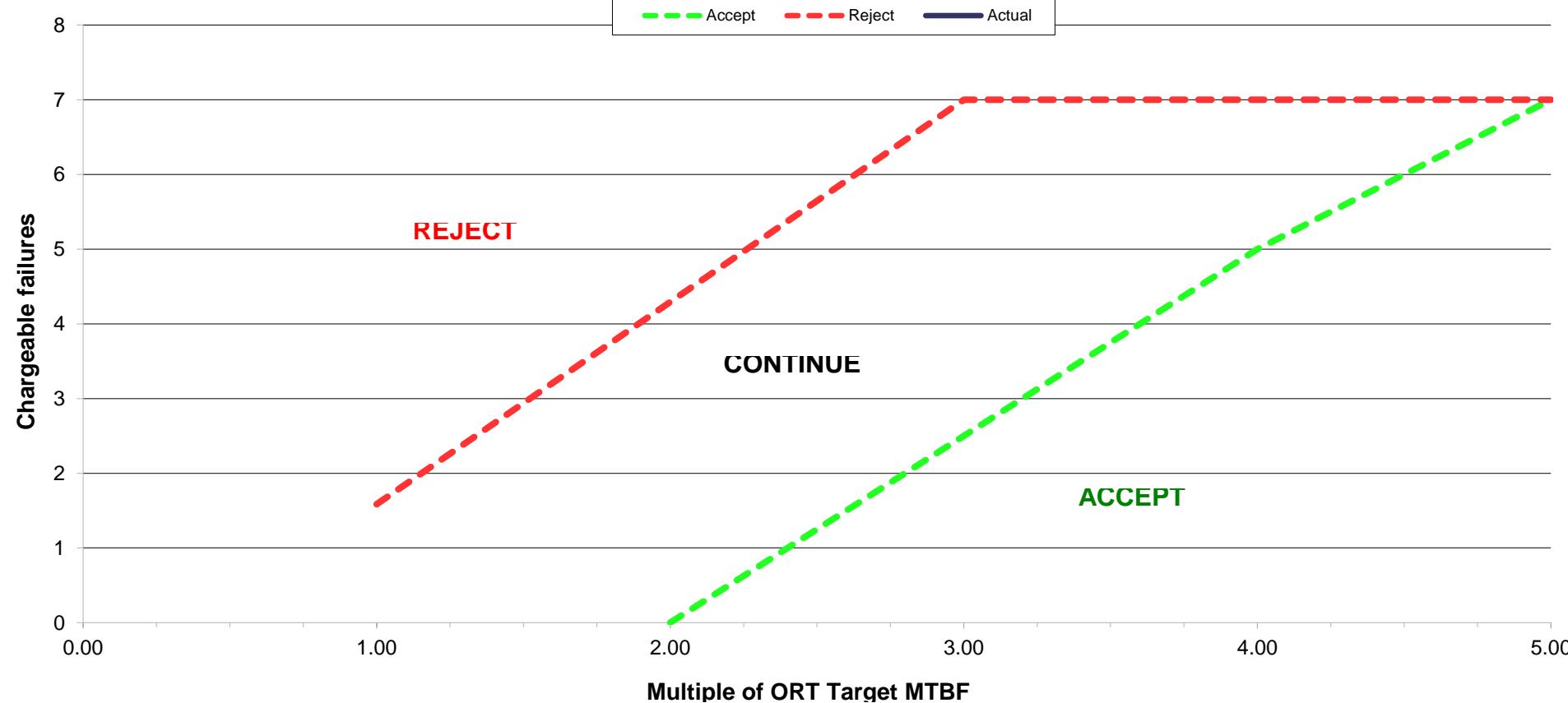
6

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Ongoing Reliability Test Report

Per MIL-HDBK-781D Plan IVD

Run Name	0	TARGET MTBF	0	Supplier	0	ORACLE®
STATUS	Continue	Achieved POH	0	Oracle owner (PE)	0	
Deviation		Adherence to Sample Plan	R	Systems on test	0	
Waiver	0	Platform Status key	B			
Days to accept	No MTBF!	Projected Run Duration	No MTBF!	LAST RESET	Date	01/00/00
Failure Tolerance	-1				Hours	0
Chargeable fails	0		0		Outcome	0



Chargeable fails

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Platform Status Key:

G	Continue after Pass
Y	Continue after Reject

R	In Reject / Stopped due to stop ship or purge
B	Currently in First plot

Sample Plan Status Key:

Ahead	Greater than 3 weeks ahead
Y_B	Between 1 and 3 weeks behind

R	Greater than 3 weeks behind
G	Greater than 1 week behind but less than 3 weeks ahead

REPORT DATE Jun 1, 2023

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Ongoing Reliability Test Report

CPAS details for current plot

PRODUCT	0	TARGET MTBF	0	SOURCE	0
STATUS	Continue	ORT HOURS	0	SYSTEMS	0



NCAT	ORT hours	Part number	Part desc.	System S/N	Part S/N	Fail date	TimeToFail	Site / Owner	Summary	Reliability/Latent	Chargeable
											Y
											Y
											Y

REPORT DATE Jun 1, 2023

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Ongoing Reliability Test Report

Non-chargeable failures from current plot

PRODUCT 0

TARGET MTBF 0

SOURCE 0



CPAS	ORT hours	Part number	Part desc.	System S/N	Part S/N	Fail date	TimeToFail	Site / Owner	Summary	Reliability/Latent	Chargeable
NCAT-6708	13543	7064133	HDD	AK00135423	464151T-1331CG9JNF	10/09/13			HRE	FAHH134100611	N
											N
											N
											N
											N
											N
											N
											N

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Ongoing Reliability Test Report

CPAS details from previous plots (chargeable and non chargeable)

PRODUCT

0

TARGET MTBF

0

SOURCE

0



CPAS	ORT hours	Part number	Part desc.	System S/N	Part S/N	Fail date	TimeToFail	Site / Owner	Summary	Reliability/Latent	Chargeable
NCAT-5825	5140	7076602	Motherboard	AK00109116	465769T+132 0UK042P	07/11/13	286:04:00		Fault fault.cpu.generic-sparc.c2c on FRU /SYS/MB at component /SYS/MB/CM1/CMP/CLINK2	FAHH132500009	
NCAT-5977	12393.8	7060596	Power Supply	AK00120021	465776G+130 9B301BG	07/29/13	06:04:00 AM		fault.chassis.env.power.loss on FRU /SYS/PS0 at component /SYS/PS0	FAHH133100176	
NCAT-6177	21364.4	7076602	Motherboard	AK00129718	465769T+132 7UK05T8	08/17/13	92:35:00		ereport.chassis.post.io.test-fail@/SYS/MB/SASHBA1	FAHH133400016	
NCAT-6318	27851.3	7076602	Motherboard	AK00129718	465769T+132 9UK066L	09/01/13			Fault fault.chassis.voltage.fail on FRU /SYS/MB at component /SYS/MB	FAHH133600009	
NCAT-0000	28175.3	7076602	3 Motherboard Failures			09/02/13	72:00:00		3 Motherboard Failures		

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Ongoing Reliability Test Report

CPAS details from previous plots (chargeable and non chargeable, continued)

PRODUCT 0

TARGET MTBF 0

SOURCE 0



CPAS	ORT hours	Part number	Part desc.	System S/N	Part S/N	Fail date	TimeToFail	Site / Owner	Summary	Reliability/Latent	Chargeable

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PRODUCT AND MANUFACTURER		LAST RESET INFORMATION		ACCUM ORT RESULTS		Current ORT run						
Vendor Name		Reset date		Total accepts		Start date						
Product Name		Total hours		Total rejects		Test Run Name						
ORT Target MTBF		Outcome				Deviation						
Achieved POH		Waiver				Weighting						
Systems on test		Oracle owner				Target POH to date						
Daily target POH												
CHARGEABLE FAILURE INFORMATION FOR THIS ORT PLOT												
NOTE – DO NOT USE CUT (OR CTRL-X) IN THESE CELLS. USE COPY (CTRL-C) AND DELETE (DEL) INSTEAD.												
Number	Accumulated test time	Fail CPAS	Fail part no.	Fail part	System serial	Part serial	Fail date	Time To Fail	Summary	Latent/reliability	Site/Owner	Chargeable
1												
2												
3												
4												
5												
6												Y
7												Y
8												Y

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NON-CHARGEABLE FAILURE INFORMATION FOR THIS ORT PLOT												
Number	Accumulated test time	Fail CPAS	Fail part no.	Fail part text	System serial	Part serial	Fail date	TimeToFail	Summary	Latent/reliability	Site/Owner	Chargeable
1	13543	NCAT-6708	7064133	HDD	AK00135423	464151T-1331CG9JNF	10/09/13		HRE	FAHH134100611	N	
2											N	
3											N	
4											N	
5											N	
6											N	
7											N	
8											N	

FAILURE INFORMATION FROM PREVIOUS ORT PLOTS (Chargeable and non-chargeable)												
Number	Accumulated test time	Fail CPAS	Fail part no.	Fail part text	System serial	Part serial	Fail date	TimeToFail	Summary	Latent/reliability	Site/Owner	Chargeable
1	5140	NCAT-5825	7076602	Motherboard	AK00109116	465769T+1320UK042P	07/11/13	286:04:00	U /SYS/MB at c	FAHH132500009		

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2	12393.8	NCAT-5977	7060596	Power Supply	AK00120021	465776G+1309 B301BG	07/29/13	06:04:00	on FRU /SYS/F FAHH133100176
3	21364.4	NCAT-6177	7076602	Motherboard	AK00129718	465769T+1327 UK05T8	08/17/13	92:35:00	ereport.chassis.post.io.test-fail@/SYS/MB/ FAHH133400016 SASHBA1
4	27851.3	NCAT-6318	7076602	Motherboard	AK00129718	465769T+1329 UK066L	09/01/13	fault.chassis.voltage.fail on FRU /SYS/ FAHH133600009	
5	28175.3	NCAT-0000	7076602	3 Motherboard Failures			09/02/13	72:00:00	otherboard Failures
6									
7									
8									
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WWOPS Systems: Ongoing Reliability Test (ORT) Report Template

PRST calculator		Fails	Accept time multiplier	Fails	Reject time multiplier
Discrimination Ratio (k)	2		0 1.38629436		0 -1.09861229
Alpha (Producer) Risk	20%		1 2.07944154		1 -0.40546511
Beta (Consumer) Risk	20%		2 2.77258872		2 0.28768207
			3 3.4657359		3 0.98082925
PRST constant for reject (A)	3		4 4.15888308		4 1.67397643
A = $(k+1)*(1-\text{Beta})/(2k)^*(\text{Alpha})$			5 4.85203026		5 2.36712361
PRST constant for accept (B)	0.25		6 5.54517744		6 3.06027079
B = $(\text{Beta})/(1-\text{Alpha})$			7 6.23832463		7 3.75341798
a = $\ln(B)/\ln(k)$	-2	Time	Accept fails	Time	Reject fails
c = $\ln(A)/\ln(k)$	1.5849625		0 -2		0 1.5849625
Truncation at ;			1 -0.55730496		1 3.02765754
7 fails (reject)			2 0.88539008		2 4.47035258
4.85 * mtbf (accept equiv to 5 fails)			3 2.32808512		3 5.91304762
			4 3.77078016		4 7.35574266
			5 5.2134752		5 8.79843771
PRST Graph bounds					
	Time	Accept	Reject		
	0		1.5849625		
	1.38629436	0			
	3.75341798		7		
	4.85203026	5			
	4.85203026	7	7		
Enumerated truncated PRST figures		Fails	Accept time multiplier	Fails	Reject time multiplier
			0 1.38629436		0 -1.09861229
			1 2.07944154		1 -0.40546511
			2 2.77258872		2 0.28768207
			3 3.4657359		3 0.98082925
			4 4.15888308		4 1.67397643
			5 4.85203026		5 2.36712361
			6 4.85203026		6 3.06027079

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GRAPH CALCULATION				STATUS CALCULATION		
Time	Accept	Reject	Actual	Point decision	Rolled up decision	
0.00		1.5849625		Y-axis intercept	Continue	Before fail 1, accept?
1.39	0			X-axis intercept	Continue	After fail 1, reject?
3.75		7		Reject truncation	Continue	Before fail 2, accept?
4.85	5			Accept truncation	Continue	After fail 2, reject?
4.85	7	7		Close out truncation	Continue	Before fail 3, accept?
0.00			0	Origin	Continue	After fail 3, reject?
				Before fail 1	Continue	Before fail 4, accept?
				After fail 1	Continue	After fail 4, reject?
				Before fail 2	Continue	Before fail 5, accept?
				After fail 2	Continue	After fail 5, reject?
				Before fail 3	Continue	Before fail 6, accept?
				After fail 3	Continue	After fail 6, reject?
				Before fail 4	Continue	Before fail 7, accept truncation?
				After fail 4	Continue	After fail 7, reject?
				Before fail 5	Continue	Before fail 8, accept truncation?
				After fail 5	Continue	Fail 8 reject truncation.
				Before fail 6	Continue	Current
				After fail 6		
				Before fail 7		
				After fail 7		
				Before fail 8		
				After fail 8		
0.00		0		Current status	Continue	Final decision
0		No MTBF!	Hours to accept			
0		No MTBF!	Days to accept			
0		No MTBF!	Fails to reject			
		No MTBF!	Projected Run Duration			

Reference Documents and Records

<i>Document Title</i>	<i>Number</i>	<i>ESO Controlled¹</i>	
		<i>Yes</i>	<i>No</i>
WWOPS Systems Products: Ongoing Reliability Test (ORT) Sizing Template	913-3549	X	
WWOPS Systems: Ongoing Reliability Testing (ORT) Policy	914-1736	X	

Document History and Approvals

<i>Dash</i>	<i>Rev</i>	<i>Date</i>	<i>Description of Change</i>	<i>Originator</i>
03	A	27 Jun 2005	Updated document title and Instructions sheet, and replaced accumulated hours with POH.	N/A
04	A	10 Apr 2006	Added back page, as required by Oracle doc standard, for doc history and related docs. Changed definition of deviation number and waiver number on instructions sheet. Added cell for waiver number in product data sheet and ORT plot. Added platform status key to ORT plot. Added column in product data sheet to indicate if failure latent, reliability, or TBD. Added definition of different types of fails.	N/A
05	A	29 Aug 2006	Updated sample plan adherence metric.	N/A
06	A	19 Jan 2007	Added new sheet, Sample Plan Adherence, to explain that metric, how it is calculated, and provide examples.	N/A
<i>Agile History</i>				
	<i>Rev</i>	<i>Date</i>	<i>Description of Change</i>	<i>Originator</i>
	07	21 Jan 2015	Updated from Sun to Oracle, removed Sample Plan Adherence tab and reference to obsolete document 911-2306.	N/A
<i>Fusion History</i>				
	8	6/1/2023	Update attachment category to AQP documents, so they are visible to external users. No content changes.	N/A

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1. All references to documents controlled by Engineering Services were current when this document was released.

All hard copies of this document are to be used for reference only.



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Review Version:	A	Reason for Review:	Update attachment category to AQP documents, so they are visible to external users. No content changes.	Priority:	X	Standard	Urgent
Overview:	This document describes the Ongoing Reliability Test (ORT) PRST template used to record and report ORT Run status.						
Audience:	This document is for anyone involved in the manufacturing and testing of Oracle Hardware System product lines, including Oracle Supplier Engineering, Product Engineering, Operations Program Managers and External System Suppliers.						
Reason for Change:	Update attachment category to AQP documents, so they are visible to external users. No content changes.						

Questions and Comments

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When Business Document Template is completed, email source file to eso_business_docs_us_grp@oracle.com

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