



WWOPS Systems: Ongoing Reliability Test (ORT) Sizing Template

Form (Spreadsheet)

Document Number: 913-3549

Revision: 04

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1. ORT System Configuration(s) Input:

In order to determine the number of ORT UUTs required in the quarter, fill in the data for each configuration below (for 1 to 3 configurations), then refer to the sizing recommendation provided in *Step 2*, below.

NOTE: Enter data into **white background cells only**, and **complete all 3 columns** of configuration information

	Name/Part #	MTBF (hours)	% of Supply Plan
Config 1			0%
Config 2 (optional)			0%
Config 3 (optional)			0%
Config 4 (optional)			0%
Config 5 (optional)			0%

NOTE: Percentages do not add up to 100%, or data is incomplete! Fix Req'd.

NOTE: There are two typical strategies for defining ORT UUT requirements:

- * Single (Maximum) Configuration: Units run for a full 90 days of test: Use for high-end platforms with relatively lower system MTBF's
- * Multiple Configurations: Based on typical shipping configurations. Use for relatively higher MTBF platforms

This spreadsheet calculates requirements for either. The requirements for the platform's ORT Sampling Plan are shown in Section 2, below.

2. ORT Plan – Quarterly Sizing Recommendation:

The Recommended ORT Test Plan is 0 Systems, 90 days on test each

#DIV/0!

#DIV/0!

You may choose to use a test duration greater than 28 days below, (up to 90 days)

Preferred Test Time Duration? 42

Final ORT Plan

Target ORT MTBF is 0 hours

#DIV/0!

Config Name/Part #	# of Systems per quarter

Minimum test time for each system is approximately 42 days

Purpose: This sheet contains background Information from which the spreadsheet calculations are based on and guidelines for defining the ORT program and for use of the spreadsheet. Refer to 914-1736-xx for the overall ORT program requirements.

Determine the Total Test Time

To determine a PRST decision once every quarter, the following equations are used to generate a minimum level of POH required to meet the WWOPS ORT criteria: This ORT sizing template factors in these equations.

Equation 1: Total Test Time Per Quarter = 2.4 * MTBF Target

Equation 2: Total Test Time Per Quarter = # of Units Tested Per Quarter * Test Time Per Unit

In order to ensure that the number of systems in ORT is representative of the production throughout the quarter, the sampling plan must specify the number of units in ORT every week. This can be calculated using the following equation:

Equation 3: # of Units Tested Per Quarter = # of Units Tested Per Week * 13 Weeks/Quarter

Choice of ORT Configurations

When defining system configurations used for ORT, it is suggested that one of the following strategies is used:

- Use the supply plan strategy, in which the top two or three highest shipping volume configurations are utilized.
- Use the Min/Max strategy, which uses the platform's minimum and maximum configurations allowing corner case validation
- Use a mix which allows the most comprehensive coverage of the platforms shipping configurations

To determine the test sample to generate a minimum quarterly POH, the total test time must be calculated using Equation 4. However, each product group may establish reasonable bounds for the test time and number of units specified in ORT, provided that the total test time every quarter as calculated using Equation 1 is achieved.

Equation 4: Total Test Time Per Quarter = (# of Units Tested Per Week * 13 Weeks/Quarter) * Test Time Per Unit

Supply Plan Strategy On the “User Input” sheet, record the percentage of the supply plan for each ORT configuration. The ORT configurations together must represent at least 50% of the supply plan. In case a forward-looking supply plan by configuration is not available, use the configuration mix from the previous quarter instead. Modify the configuration mix to reflect any new or retiring configurations that are expected during the next quarter. **Exception** Configurations Other configurations can be approved by the Oracle Product ORT Team and managed as an exception, when the 50% requirement cannot be met with Purchase to Order (PTO) configurations alone.

Calculation Page

ORT target MTBF calculation

	MTBF	Supply plan %age	Complete entry?
Config 1	0	0.00%	FALSE
Config 2 (optional)	0	0.00%	FALSE
Config 3 (optional)	0	0.00%	FALSE
Config 4 (optional)	0	0.00%	FALSE
Config 5 (optional)	0	0.00%	FALSE
Total		0.00%	

Combined MTBF=> **0**

Tests for valid data entry

2 configs?	3 configs?	Any 1-5 configs?	1 config?	
FALSE	FALSE	FALSE	0	1=true, 0=false
Sensible %ages?		Good data?		
FALSE		FALSE		

Quarterly hours required

Quarterly hours	0	UUTs req'd
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Bounding conditions for quarterly hours

Days in Test	40	80	160	Req'd
28	26880	53760	107520	0
42	40320	80640	161280	0
84	80640	161280	322560	0
90	86400	172800	345600	0

Possible outcomes

	Test time (days)	Number of systems
MTBF very low	28	40
TRUE	28	40
Moderate MTBF		
FALSE		
High MTBF		
FALSE		

Range of options

	Between	and		
Test time (days)	0	0	28	
Systems	0	0	0	

Preferred outcome

Systems on test	
Minimum time on test	28 days
PREFERRED time on test	42 days

	TOTAL UUTs		
Split by config	#DIV/0!	#DIV/0!	#DIV/0!
	28 day min	PREFERRED Duration	90 Day Duration
Config 1	#DIV/0!	#DIV/0!	#DIV/0!
Config 2 (optional)	#DIV/0!	#DIV/0!	#DIV/0!
Config 3 (optional)	#DIV/0!	#DIV/0!	#DIV/0!
Config 4 (optional)	#DIV/0!	#DIV/0!	#DIV/0!
Config 5 (optional)	#DIV/0!	#DIV/0!	#DIV/0!

Adjust UUT split for exact number

Excess	#DIV/0!	Carry forward excess	#DIV/0!
Config 1	0	#DIV/0!	
Config 2 (optional)	0	#DIV/0!	

Config 3 (optional)	0	#DIV/0!
Config 4 (optional)	0	#DIV/0!
Config 5 (optional)	0	
Total	0	

Related Information

Reference Documents and Records			
Document Title	Number	ESO Controlled ¹	
		Yes	No
WWOPS Systems: Ongoing Reliability Test (ORT) Report Template	913-3532	x	
WWOPS Systems: Ongoing Reliability Testing (ORT) Policy	914-1736	x	

Document History and Approvals				
Dash	Rev	Date	Description of Change	Originator
01	A	27 Jan 2004	Original Release	Derek Orr
02	A	22 Aug 2005	Revised to allow single configurations as seen in high end operations	Stan Tamiyasu
03	A	19 Jan 2007	Added 'background' sheet to explain spreadsheet calculations	Stan Tamiyasu

Agile History			
Rev	Date	Description of Change	Originator
04	27 Jun 2014	Added room for additional system configurations (from three to five) to be incorporated into the ORT Quarterly Test plan.	Stefan Myslicki

1. All references to documents controlled by Engineering Services were current when this document was released.
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Review Version:	A	Reason for Review:	Added room for additional system configurations (from three to five) to be incorporated into the ORT Quarterly Test plan.	Priority:	<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Urgent
Overview:	This sheet contains background Information from which the spreadsheet calculations are based on and guidelines for defining the ORT program and for use of the spreadsheet. Refer to 914-1736-xx for the overall ORT program requirements.					
Audience:	Oracle Internal and External Product Engineers and Program Managers involved in ORT quarterly quantity planning					
Reason for Change:	Added room for additional system configurations (from three to five) to be incorporated into the ORT Quarterly Test plan.					

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Relationship and Reference Documents: (Use when applicable)	
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