

		intended behaviour			observed behaviour		
test family	test	PNVI-plain	PNVI-ae	PNVI-ae-udi	Cerberus (decreasing allocator)		
					PNVI-plain	PNVI-ae	PNVI-ae-udi
1	provenance_basic_global_xy.c	UB			not triggered		
	UB (line 9)						
	not triggered						
	UB (line 9)						
2	cheri_03_ii.c	UB			UB (except with <i>permissive_pointer_arith</i> switch)		
3	pointer_offset_from_ptr_subtraction_global_xy.c	UB (pointer subtraction)			UB (pointer subtraction)		
	Or						
	UB (out-of-bound store with <i>permissive_pointer_arith</i> switch)						
4	provenance_equality_global_xy.c	defined, nondet			not triggered		
	defined (ND except with <i>strict_pointer_equality</i> switch)						
	not triggered						
	defined (ND except with <i>strict_pointer_equality</i> switch)						
	not triggered						
	defined (ND except with <i>strict_pointer_equality</i> switch)						
5	provenance_roundtrip_via_intptr_t.c	defined			defined		
6	provenance_basic_using_uintptr_t_global_xy.c	defined			not triggered		
	defined						
	not triggered						
	defined						
7	pointer_offset_from_int_subtraction_global_xy.c	defined			defined		
	defined						
	defined						
	defined						
8	pointer_offset_xor_global.c	defined			defined		
	pointer_offset_xor_auto.c				defined		
9	provenance_tag_bits_via_uintptr_t_1.c	defined			defined		
10	pointer_arith_algebraic_properties_2_global.c	defined			defined		
11	pointer_arith_algebraic_properties_3_global.c	defined			defined		
12	pointer_copy_memcpy.c	defined			defined		
13	pointer_copy_user_dataflow_direct_bytewise.c	defined			defined		
13	provenance_tag_bits_via_repr_byte_1.c	defined			defined		
15	pointer_copy_user_ctrlflow_bytewise.c	defined			defined		
16	pointer_copy_user_ctrlflow_bitwise.c	defined			defined		
17	provenance_equality_uintptr_t_global_xy.c	defined			not triggered		
	defined (true)						
	not triggered						
	defined (true)						
18	provenance_union_punning_2_global_xy.c	defined	UB (line 16, deref)	UB (line 16, store)	not triggered		
	provenance_union_punning_2_global_yx.c	defined	UB (line 16, deref)	UB (line 16, store)	defined	UB (line 16, deref)	UB (line 16, store)
	provenance_union_punning_2_auto_xy.c	defined	UB (line 16, deref)	UB (line 16, store)	not triggered		
	provenance_union_punning_2_auto_yx.c	defined	UB (line 16, deref)	UB (line 16, store)	defined	UB (line 16, deref)	UB (line 16, store)
19	provenance_union_punning_3_global.c	defined			defined		
20	provenance_via_io_percentp_global.c	filesystem and scanf() are not currently supported by Cerberus					
	provenance_via_io_bytewise_global.c						
	provenance_via_io_uintptr_t_global.c						
21	pointer_from_integer_1pg.c	UB (line 7)			UB in one exec (line 7)		
	pointer_from_integer_1ig.c	defined (j = 7)	UB (line 8)		defined (j = 7)	UB (line 8)	
	pointer_from_integer_1p.c	UB (line 6)			UB (line 6)		
	pointer_from_integer_1i.c	defined (j = 7)	UB (line 7)		defined (j = 7)	UB (line 7)	
	pointer_from_integer_1ie.c	defined (j = 7)			defined (j = 7)		
	pointer_from_integer_2.c	defined (j = 7)	UB (line 7)		defined (j = 7)	UB (line 7)	
	pointer_from_integer_2g.c	defined (j = 7)			defined (j = 7)		
	provenance_lost_escape_1.c	defined			defined		
22	provenance_roundtrip_via_intptr_t_onepast.c	UB (line 10)		defined	UB (line 10)		defined
23	pointer_from_int_disambiguation_1.c	defined (y = 11)			defined (y = 11)		
	not triggered						
	pointer_from_int_disambiguation_1_xy.c	UB (line 14)		defined	UB (line 14)		defined (x = 11)
	pointer_from_int_disambiguation_2.c				not triggered		
	pointer_from_int_disambiguation_2_xy.c	UB (line 15)		UB (line 15)	UB (line 15)		
pointer_from_int_disambiguation_3.c				not triggered			
pointer from int disambiguation 3 xv.c				not triggered			

(bold = tests mentioned in the document)

green = Cerberus behaviour matches intent

blue = Cerberus behaviour matches intent (with *permissive\_pointer\_arith* switch)

grey = Cerberus' allocator doesn't trigger the interesting behaviour