### core::scalar

template <class T, class Allocator = allocator<T> > class scalar;

#### Member types

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| **member type** | **definition** | **notes** |
| value\_type | The first template parameter (T) |  |
| allocator\_type | The second template parameter (Allocator) | defaults to: allocator<T> |
| reference | value\_type& |  |
| const\_reference | const value\_type& |  |
| pointer | value\_type\* |  |
| const\_pointer | const value\_type\* |  |
| size\_type | an unsigned integral type that can represent any non-negative value of difference\_type | usually the same as size\_t |
| difference\_type | a signed integral type | usually the same as ptrdiff\_t |

#### Member functions

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| (constructor) | Construct scalar (public member function) |
| (destructor) | Scalar destructor (public member function) |
| operator= | Assign content (public member function) |

##### Capacity:

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| empty | Test whether container is empty (public member function) |
| size | Return size (public member function) |
| max\_size | Return maximum size (public member function) |

##### Element access:

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| operator[] | Access element (public member function) |
| at | Access element (public member function) |
| data | Access data (public member function) |

##### Modifiers:

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| assign | Assign a new scalar (public member function) |
| create | Create a scalar copying the data (public member function) |
| fill | Fill scalar with specified value (public member function) |
| linear\_fill | Fill scalar with linear gradient values (public member function) |
| generate | Generate values for scalar with function (public member function) |
| remap | Map source data to a scalar (public member function) |
| swap | Swap content (public member function) |
| clear | Clear content (public member function) |

##### Operations:

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| operator+= | Add a value or scalar (public member function) |
| operator-= | Subtract a value or scalar (public member function) |
| operator\*= | Multiply a value or scalar (public member function) |
| operator/= | Divided by a value or scalar (public member function) |
| operator&= | And a value or scalar (public member function) |
| operator^= | Xor a value or scalar (public member function) |
| operator|= | Or a value or scalar (public member function) |

##### Observers:

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| get\_allocator | Get allocator (public member function) |

##### Non-member function overloads:

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| operator+ | Scalar addition (public member function) |
| operator- | Scalar subtraction (public member function) |
| operator\* | Scalar multiplication (public member function) |
| operator/ | Scalar division (public member function) |
| operator& | Scalar and (public member function) |
| operator^ | Scalar xor (public member function) |
| operator| | Scalar or (public member function) |
| operator< | Scalar less than (public member function) |
| operator> | Scalar greater than (public member function) |
| operator<= | Scalar less than or equal to (public member function) |
| operator>= | Scalar greater than or equal to (public member function) |
| operator== | Scalar equal to (public member function) |
| operator!= | Scalar not equal to (public member function) |