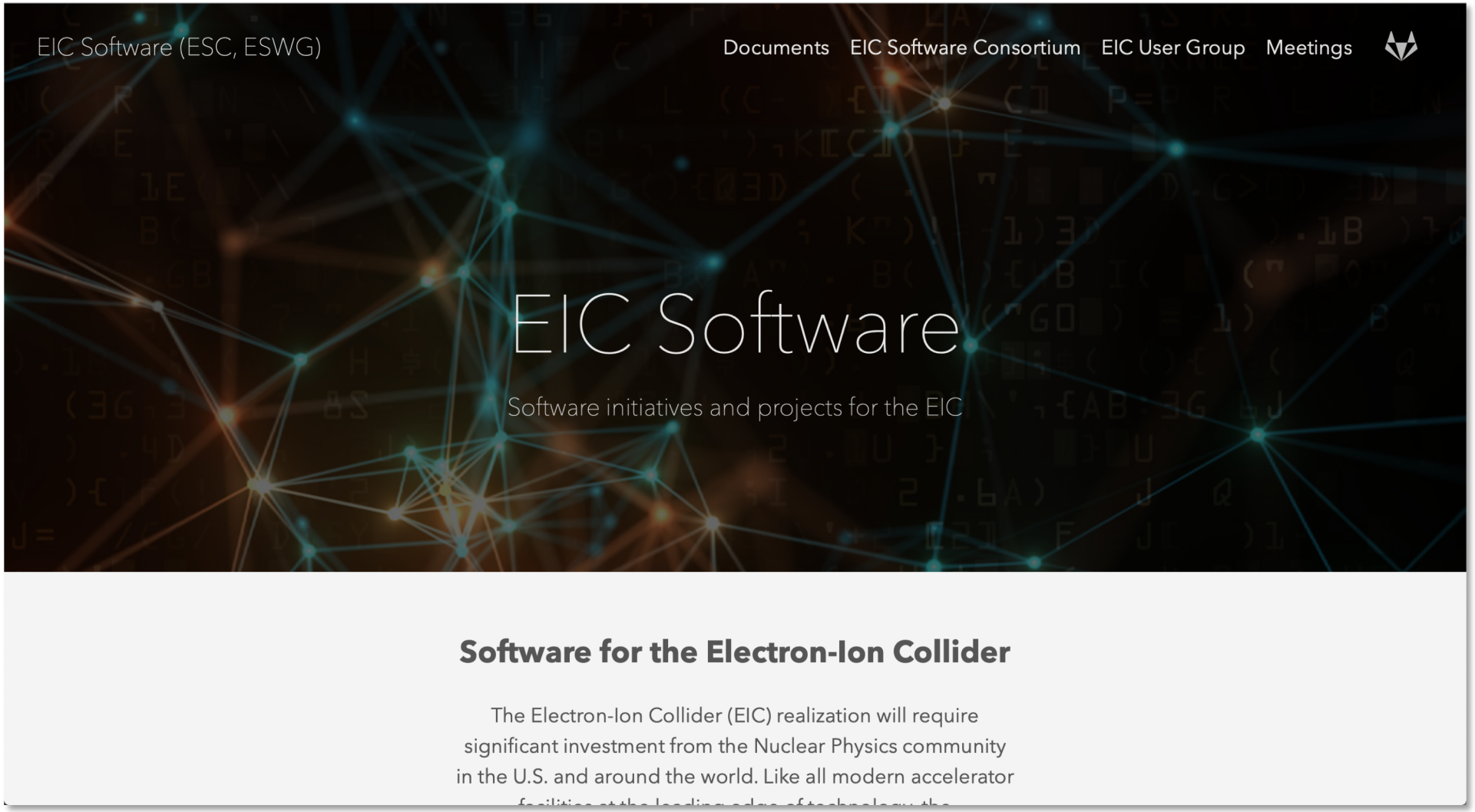
Single point of entry



EIC Software website https://eic.gitlab.io

Single point of entry: Content

Color coding Available ● Not available

Introduction
- EIC Software Consortium
- EICUG Software Working Group

Documents
- overview (rates, requirements, visions)
- container guidelines (update)
- geometry exchange
- MCEG catalogue
- MCEG requirements

Meetings
- schedule including meeting links
- archive of 2015 – 2018 Meetings

References to
- repository
- documentation
- tutorials
- other EIC software resources

What else?

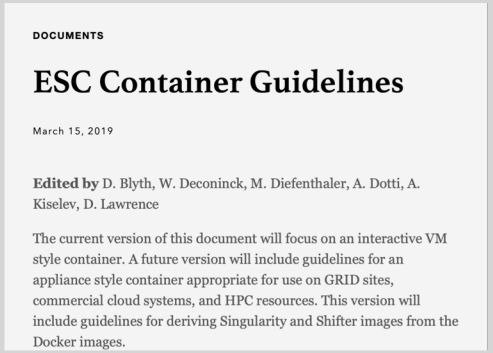
Single point of entry: Documents

Color coding Available ● Not available

Overview

- request at HOW 2019
- possible structure
  - rates
  - requirements
  - vision

Container guidelines



DOCUMENTS

ESC Container Guidelines

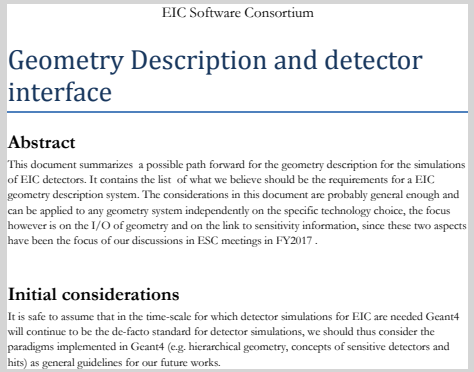
March 15, 2019

Edited by D. Blyth, W. Deconinck, M. Diefenthaler, A. Dotti, A. Kiselev, D. Lawrence

The current version of this document will focus on an interactive VM style container. A future version will include guidelines for an appliance style container appropriate for use on GRID sites, commercial cloud systems, and HPC resources. This version will include guidelines for deriving Singularity and Shifter images from the Docker images.

- update required

Geometry exchange



EIC Software Consortium

Geometry Description and detector interface

Abstract

This document summarizes a possible path forward for the geometry description for the simulations of EIC detectors. It contains the list of what we believe should be the requirements for a EIC geometry description system. The considerations in this document are probably general enough and can be applied to any geometry system independently on the specific technology choice, the focus however is on the I/O of geometry and on the link to sensitivity information, since these two aspects have been the focus of our discussions in ESC meetings in FY2017 .

Initial considerations

It is safe to assume that in the time-scale for which detector simulations for EIC are needed Geant4 will continue to be the de-facto standard for detector simulations, we should thus consider the paradigms implemented in Geant4 (e.g. hierarchical geometry, concepts of sensitive detectors and hits) as general guidelines for our future works.

- convert to Markdown

MCEG requirements

- minutes of MCEG workshop
- started but no substantial progress yet

What else?

Single point of entry: Online catalogue for MCEGs

- **Goals** Hosted on https://eic.gitlab.io, editable for EIC group on GitLab
- **First steps** Agree on fields and then open call for input among EICUG

- **Proposed fields**
  - **Categories** ep, eA, radiative effects
  - Name
  - Contact information
  - **Brief Description** What processes are described? What is unique about the MCEG? Include version number as reference.
  - **References (links)** website, repository, documentation, container, validation plots

Example: Online catalogue for MCEGs

- **Category** ep, eA, exclusive vector meson production, general photoproduction
- **Name** eSTARlight
- **Contact Information** Spencer Klein, srklein@lbl.gov
- **Brief description** eSTARlight simulates coherent photoproduction and electroproduction of vector mesons in ep and eA collisions. It can simulate a variety of different vector mesons, and it also includes an interface to DPMJET, which allows for general simulation of photonuclear interactions. It internally simulates most simple (2-body) vector meson decays with a correct accounting for the initial photon polarization (transverse for Q^2 ~ 0, with an increasing longitudinal component with increasing Q^2) in the angular distributions of the final state. It can also interface to PYTHIA8 to simulate more complicated decays.
- **References** The code is freely available from https://estarlight.hepforge.org/ The Readme file includes a fairly comprehensive users manual. The physics behind the code is documented in M. Lomnitz and S. Klein, Phys. Rev. C99, 015203 (2019).