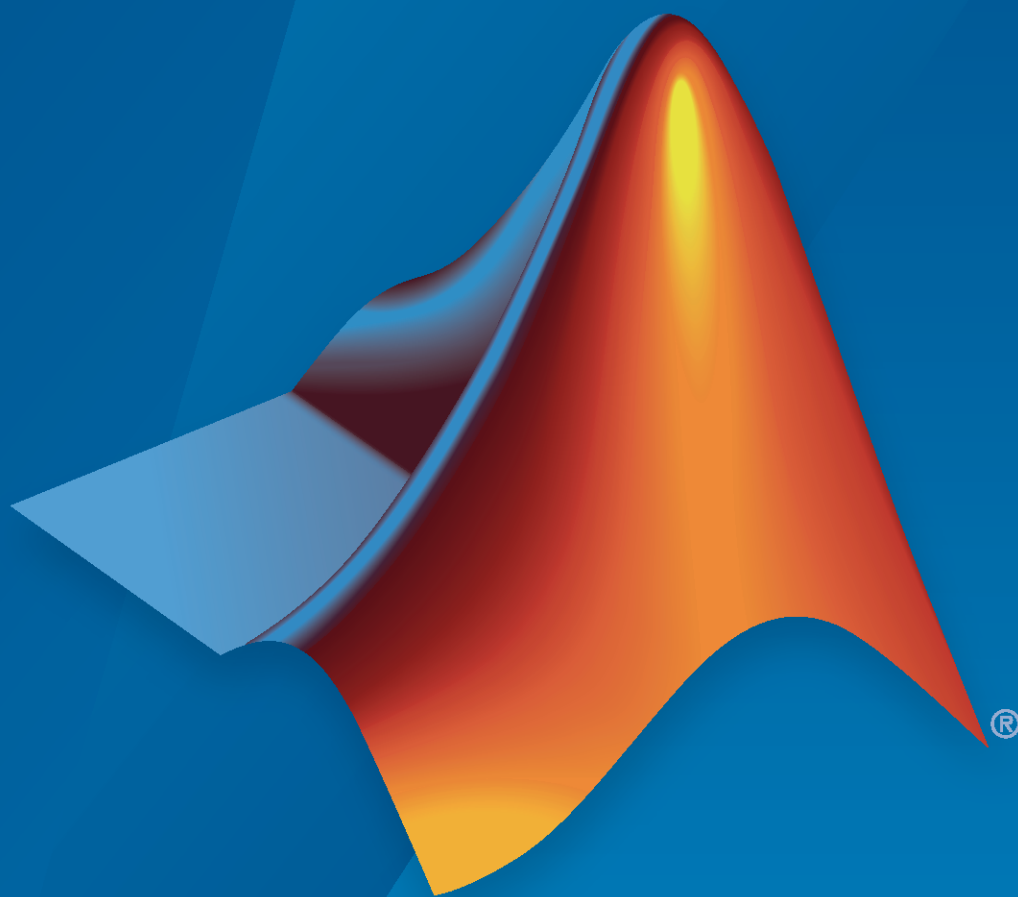


Polyspace[®] Bug Finder[™] Access[™] Release Notes



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Polyspace[®] Bug Finder[™] Access[™] Release Notes

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R2019b

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R2020b

Version: 2.3

New Features

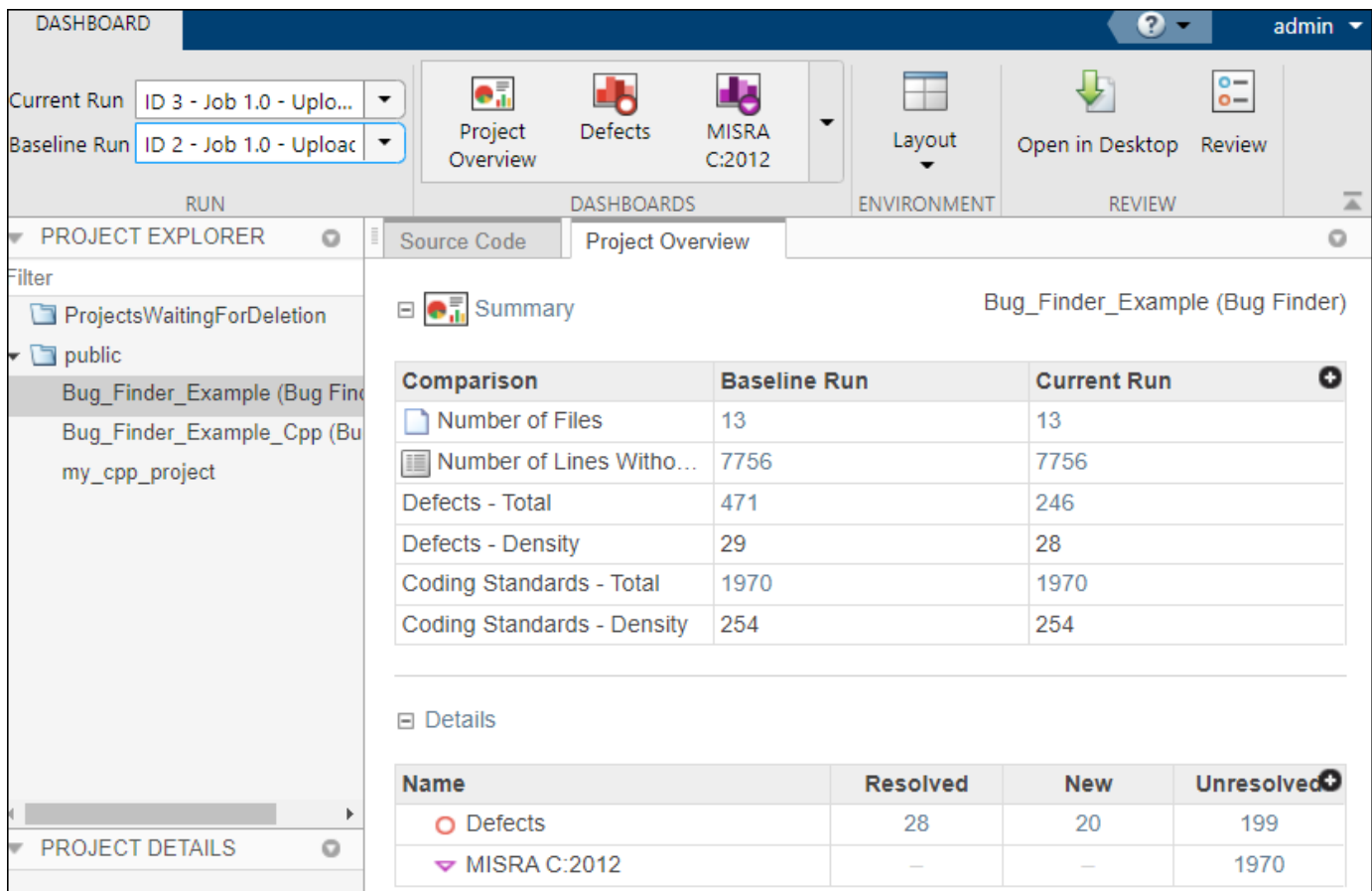
Bug Fixes

Compatibility Considerations

Dashboard and Review in Web Browser

Code Quality Improvement Progress: Compare results from current run to previous runs and determine progress in code quality improvement

In R2020b, you can select any two runs of a project in the Polyspace® web interface (current and baseline runs) and compare them. You can compare a current run to only older baseline runs.



The screenshot displays the Polyspace web interface dashboard. At the top, there are dropdown menus for 'Current Run' (ID 3 - Job 1.0 - Uplo...) and 'Baseline Run' (ID 2 - Job 1.0 - Uploac). Below these are navigation buttons for 'Project Overview', 'Defects', 'MISRA C:2012', 'Layout', 'Open in Desktop', and 'Review'. The main content area is titled 'Bug_Finder_Example (Bug Finder)' and contains a 'Comparison' table and a 'Details' table.

Comparison	Baseline Run	Current Run
Number of Files	13	13
Number of Lines Witho...	7756	7756
Defects - Total	471	246
Defects - Density	29	28
Coding Standards - Total	1970	1970
Coding Standards - Density	254	254

Name	Resolved	New	Unresolved
Defects	28	20	199
MISRA C:2012	-	-	1970

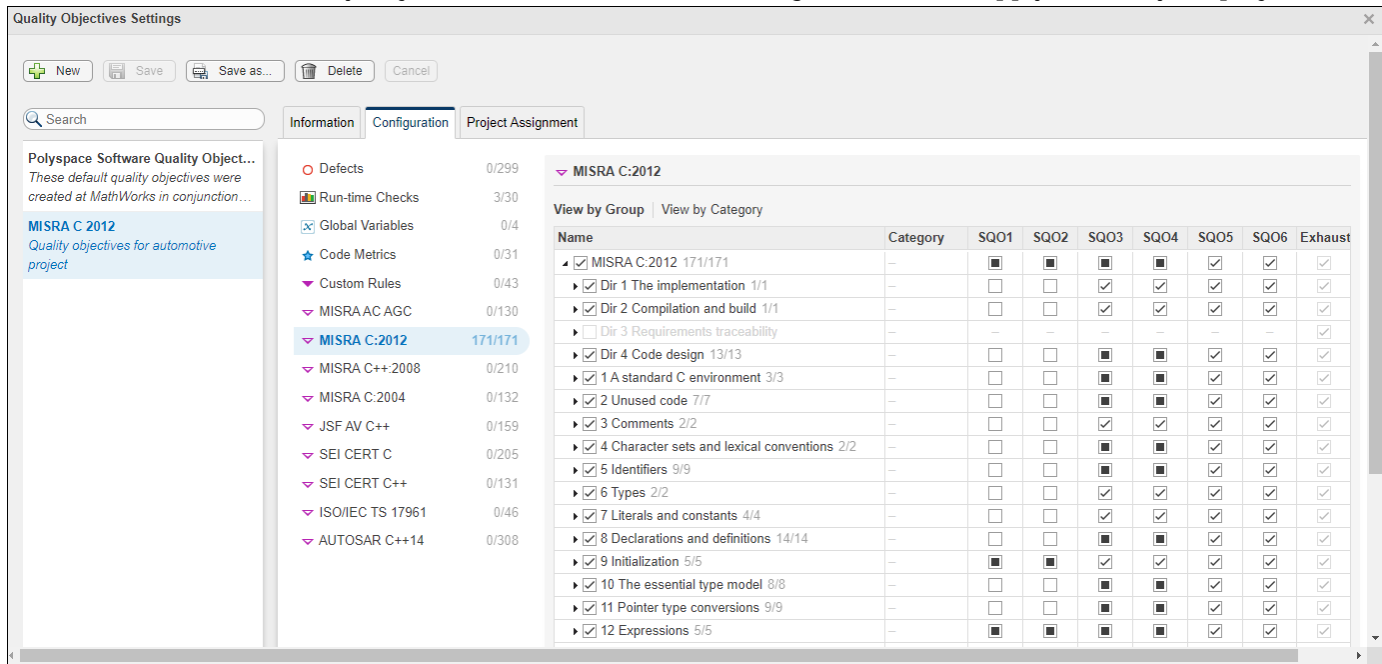
The comparison shows the number of analysis findings that are:

- **Resolved.** Findings from the baseline run no longer found in the current run.
- **New.** Findings in the current run that were not present in the baseline run.
- **Unresolved.** Findings from the baseline run that are still present in the current run.

Code Quality Objectives: Define custom quality objectives definitions and apply them to specific projects

In R2020b, you can create custom quality objectives definitions and apply those definitions to specific projects. For instance, if you want to track the compliance of a project with a coding standard, you

can create Quality Objective thresholds for that coding standard and apply them to your project.



To create custom quality objectives definitions, you must be an **Administrator** or **Owner**.

Previously, custom quality objectives applied to all projects.

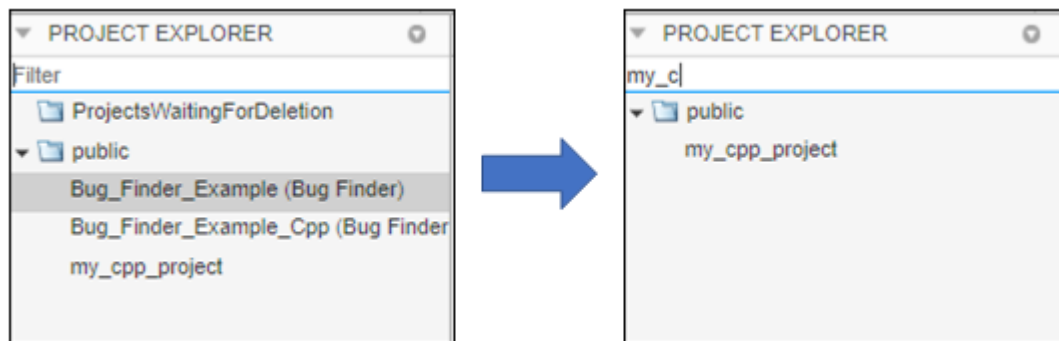
Source Code Tooltips: Display only information necessary to understand the selected defect

In R2020b, Bug Finder tooltips show only information that is necessary to understand the currently selected defect.

Previously, tooltips showed range information, such as all possible values of a specific variable in the given context. You can still see this range information in Code Prover.

Project Selection: Find a project in the PROJECT EXPLORER through a text filter

In R2020b, you can use a text filter in the **PROJECT EXPLORER** to find projects that are not visible in a folder hierarchy. The text filter is not case sensitive.



Installation

Bug Tracking Tool: Integrate with Jira Software Cloud

In R2020b, you can integrate Jira Software Cloud with Polyspace Access. After you configure Polyspace Access, you can create a Jira ticket to track Polyspace findings. The ticket is populated with details of the finding and a link to open that finding in Polyspace Access. See “Configure Issue Tracker”.

Previously, you could integrate Polyspace Access with only self-managed Jira Software.

Cluster Admin Settings: Validate values of settings on demand or on save

In R2020b, the **Cluster Admin** validates the settings that you enter in the **Cluster Settings** when you save those settings. You can also validate the settings before you save by clicking **Validate now** at the bottom of the page.

HTTPS Configuration: Configure services without specifying ports or SSL certificates

In R2020b, if you install Polyspace Access on a single node, the ports of the Polyspace Access services are no longer exposed. You do not need to specify port numbers for the services or to provide SSL private keys and certificates for the HTTPS configuration. See “Configure Polyspace Access for HTTPS”

Previously, you had to check the availability of the ports for the services, and then you provided a private key and SSL certificate file to enable the HTTPS protocol for Polyspace Access.

Functionality Replaced: Polyspace Access embedded LDAP

The Polyspace Access embedded LDAP is removed in R2020b. To continue using custom login credentials for Polyspace Access, use the **User Manager** internal directory instead. See “Authenticate Users from Internal Directory”.

The screenshot shows the 'User Manager' interface. At the top, there is a blue header with the text 'User Manager' on the left and 'admin' with a dropdown arrow on the right. Below the header is a 'Dashboard' section with a 'Create' button on the right. The main content is a table with three columns: 'Sign-in ID', 'Display Name', and 'Email'. The table contains four rows of user data. Each row has a small 'ADMIN' badge next to the 'Sign-in ID' and a delete icon (an 'X' with a dropdown arrow) at the end of the row.

Sign-in ID	Display Name	Email
admin ADMIN	admin	admin@email.com
jdoe	John Doe	
jsmith	Jane Smith	
rroll	Richard Roll	

Compatibility Considerations

In the **User Manager** interface, create users to transfer the user names and passwords that you stored in the embedded LDAP LDIF file to the **User Manager** database.

Changes in Polyspace Access docker containers, options, and binaries

In R2020b, the following docker containers, options, and binaries have been renamed:

- The cop-docker-agent binary is now called the admin-docker-agent
- **HTTPS Options**

Previous Option Name	Current Option Name
--https-certificate-file	--ssl-cert-file
--https-private-key-file	--ssl-key-file
--https-trusted-certificates-file	--ssl-ca-file

- **Containers**

Previous Container Name	Current Container Name
polyspace-db	polyspace-access-db-main
polyspace-etl	polyspace-access-etl-main
polyspace-gateway	gateway
polyspace-issuetracker	issuetracker-server-main
polyspace-web-server	polyspace-access-web-server-main

Compatibility Considerations

In your scripts, replace instances of the previous names with the current names. You cannot reuse a settings configuration file (`settings.json`) from a previous release of Polyspace Access with the R2020b software.

R2020a

Version: 2.2

New Features

Bug Fixes

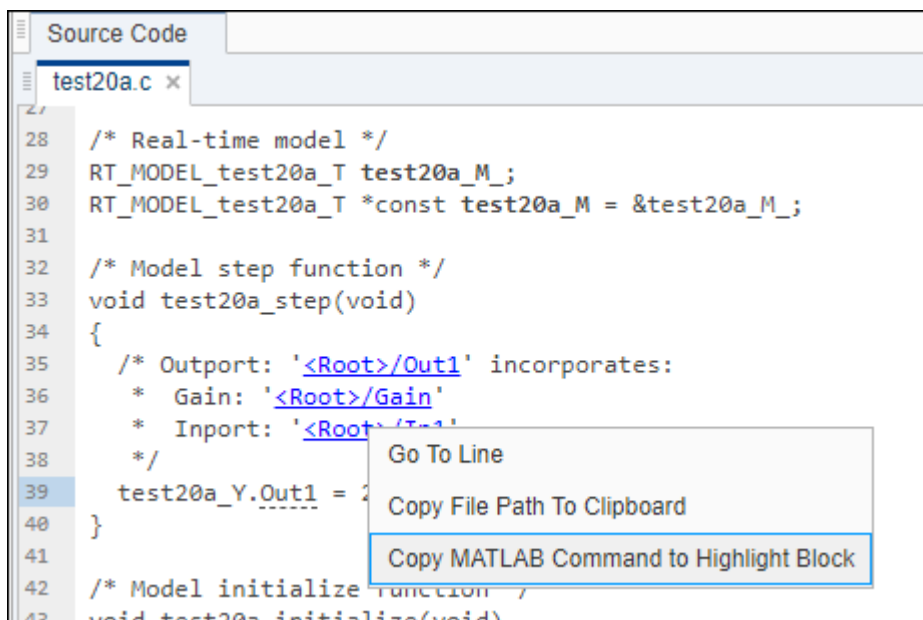
Dashboard and Review in Web Browser

Simulink Support: Navigate from generated code in Polyspace Access to blocks in model

In R2020a, if you run Polyspace on generated code in Simulink® and upload the results to Polyspace Access, you can navigate from the source code in Polyspace Access to blocks in the model.

On the **Source Code** pane in the Polyspace Access web interface, links in code comments show blocks that generate the subsequent lines of code. To see the block in the model:

- 1 Right-click a link and select **Copy MATLAB Command to Highlight Block**.



The screenshot shows a code editor window titled 'Source Code' with a tab for 'test20a.c'. The code contains several lines of C code with comments. A context menu is open over the comment on line 36, which reads: '/* Model step function */ void test20a_step(void) { /* Outport: '<Root>/Out1' incorporates: * Gain: '<Root>/Gain' * Inport: '<Root>/In1' */ test20a_Y.Out1 = 2; }'. The menu options are: 'Go To Line', 'Copy File Path To Clipboard', and 'Copy MATLAB Command to Highlight Block'. The third option is highlighted with a blue border.

```

28 /* Real-time model */
29 RT_MODEL_test20a_T test20a_M;
30 RT_MODEL_test20a_T *const test20a_M = &test20a_M;
31
32 /* Model step function */
33 void test20a_step(void)
34 {
35     /* Outport: '<Root>/Out1' incorporates:
36      * Gain: '<Root>/Gain'
37      * Inport: '<Root>/In1'
38     */
39     test20a_Y.Out1 = 2;
40 }
41
42 /* Model initialize function */
43 void test20a_initialize(void)

```

This action copies the MATLAB® command required to highlight the block. The command uses the `Simulink.ID.hilite` function.

- 2 In MATLAB, with the model open, paste and run the copied command.

Bug Tracking Tool Support: Create Redmine tickets for Polyspace Access results and assign to developers

In R2020a, Polyspace Access supports integration with the Redmine bug tracking tool. If you use Redmine, after you configure Polyspace Access, you can create a Redmine ticket to track Polyspace findings. The ticket is populated with details of the finding and a link to open that finding in Polyspace Access. You can add the ticket to any existing Redmine project.

Create Redmine ticket for finding #9 (10.1 The value of an expression...)

Project*

Tracker*

Subject* 10.1 The value of an expression of integer type shall not be implicitly converted to a

Description

Implicit conversion of the expression of underlying type 'signed int' to the type 'signed char' that is not a wider integer type of the same signedness.

Found in /local/test/sources/CP_C_R2019a/single_file_analysis.c

- Go to Polyspace finding here:
<https://myAccess.company.com:9443/metrics/index.html?a=review&p=3&r=1&fid=9>

Status*

Priority*

Assignee

Estimated time

Once you create a ticket, the **Result Details** pane displays a link that you can click to open the ticket in the Redmine interface. See also Track Issue in Bug Tracking Tool.

Bug Tracking Tool Support: Manage tickets for multiple findings

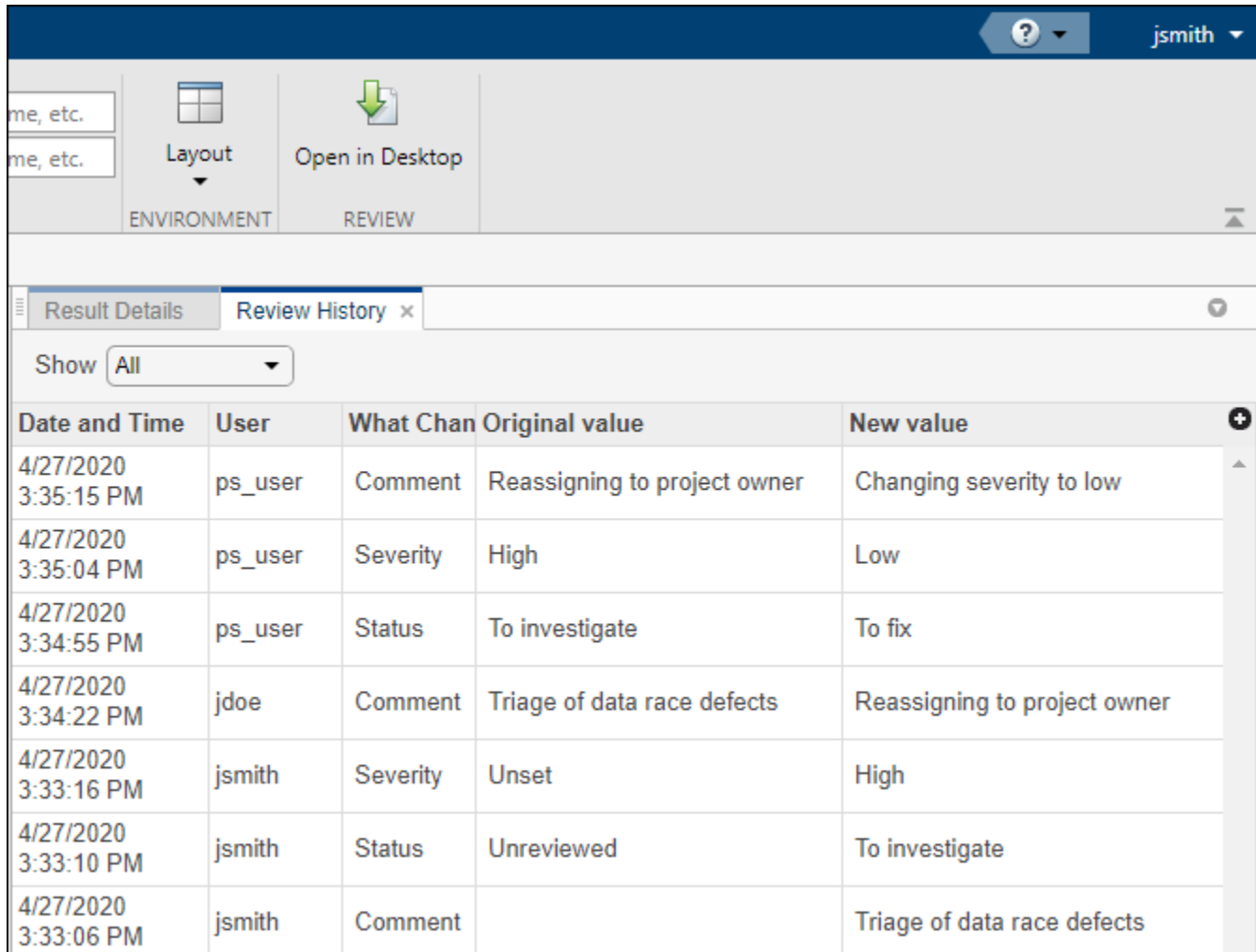
In R2020a, if you create a bug tracking tool ticket in Polyspace Access, you can select multiple findings that you associate with the ticket. If a ticket already exists, you can add that ticket to additional findings or you can detach the ticket from findings that are associated with the ticket.

Previously, you could create a ticket for only one finding at a time and you could not detach a ticket from a finding.

For more information, see Track Issue in Bug Tracking Tool.

Results Review: See review history of findings

In R2020a, you can open the **Review History** pane to see all the changes to the review fields of findings with a timestamp and the name of the user who made the change. On the Polyspace Access toolstrip, select **Layout > Show/Hide View**.



Date and Time	User	What Chan	Original value	New value
4/27/2020 3:35:15 PM	ps_user	Comment	Reassigning to project owner	Changing severity to low
4/27/2020 3:35:04 PM	ps_user	Severity	High	Low
4/27/2020 3:34:55 PM	ps_user	Status	To investigate	To fix
4/27/2020 3:34:22 PM	jdoe	Comment	Triage of data race defects	Reassigning to project owner
4/27/2020 3:33:16 PM	jsmith	Severity	Unset	High
4/27/2020 3:33:10 PM	jsmith	Status	Unreviewed	To investigate
4/27/2020 3:33:06 PM	jsmith	Comment		Triage of data race defects

You can use this information to better understand how and why the **Severity** or **Status** of a finding has changed, and retrieve previous comments that were overwritten.

For more information, see Review History.

Results Review: See the configuration options used for analysis

In R2020a, you can open the **Configuration Settings** pane to view the Polyspace configuration options that were enabled to generate the analysis results. On the Polyspace Access toolstrip, select **Layout > Show/Hide View**.

Options	Value
-author	MathWorks
-checkers	BAD_PLAIN_CHAR_USE, BITWISE_NEG, FLOAT_ABSORPTION, FLOAT_CONV_OVFL, FLOAT_OVFL, FLOAT_STD_LIB, FLOAT_ZERO_DIV, INT_CONSTANT_OVFL, INT_CONV_OVFL, INT_OVFL, INT_PRECISION_EXCEEDED, INT_STD_LIB, INT_TO_FLOAT_PRECISION_LOSS, INT_ZERO_DIV, INVALID_OPERATION_ON_BOOLEAN, SHIFT_NEG, SHIFT_OVFL, SIGN_CHANGE, UINT_CONSTANT_OVFL, UINT_CONV_OVFL, UINT_OVFL
-compiler	gnu4.6
-critical-section-begin	BEGIN_CRITICAL_SECTION:Cs10, acquire_sensor:Cs11, acquire_printer:Cs12, acquire_sensor2:Cs13, acquire_printer2:Cs14
-critical-section-end	END_CRITICAL_SECTION:Cs10, release_sensor:Cs11, release_printer:Cs12, release_sensor2:Cs13, release_printer2:Cs14
-date	08/12/2019
-do-not-generate-results-for	all-headers
-dos	true
-entry-points	bug_datarace_task1, bug_datarace_task2, bug_datarace_task3, bug_datarace_task4, bug_deadlock_task1, bug_deadlock_task2, bug_doublelock_task, bug_doubleunlock_task, bug_badlock_task, bug_badunlock_task, bug_dataracestdlib_task1, bug_dataracestdlib_task2, bug_destroylocked_task, corrected_datarace_task1, corrected_datarace_task2, corrected_datarace_task3, corrected_datarace_task4, corrected_deadlock_task1, corrected_deadlock_task2, corrected_doublelock_task, corrected_doubleunlock_task, corrected_badlock_task, corrected_badunlock_task, corrected_dataracestdlib_task1, corrected_dataracestdlib_task2, corrected_destroylocked_task
-lang	C
-misra3	mandatory
-prog	Bug_Finder_Example
-results-dir	D:\Polyspace\Bug_Finder_Example\BF_Result_1
-target	x86_64
-verif-version	1.0

You can use this information to better understand your results. For instance, you might expect to see a certain coding rule violation but the checker for this rule is not enabled. Previously, you had to parse the **Run Log** to see which options and checkers were enabled.

For more information, see Configuration Settings.

Code Quality Objectives: Customize thresholds used to track the quality of your code

In R2020a, if you use Quality Objectives to track the quality of your code, you can customize the thresholds you use as pass/fail criteria to better align with your company or project requirements. For instance, you can define quality gates to ensure adherence to a specific external coding standard.

Changes to settings apply to all projects.

Quality Objectives Criteria

- Defects 289/289
- Run-time Checks 20/30
- Global Variables 0/4
- Code Metrics 13/31
- Custom Rules 0/43
- MISRAAC AGC 1/129
- MISRA C:2012 49/170
- MISRA C++:2008 73/202
- MISRA C:2004 49/131**
- JSF AV C++ 0/157
- SEI CERT C 0/203
- SEI CERT C++ 0/126
- ISO/IEC TS 17961 0/46
- AUTOSAR C++14 0/251

MISRA C:2004

View by Group | View by Category

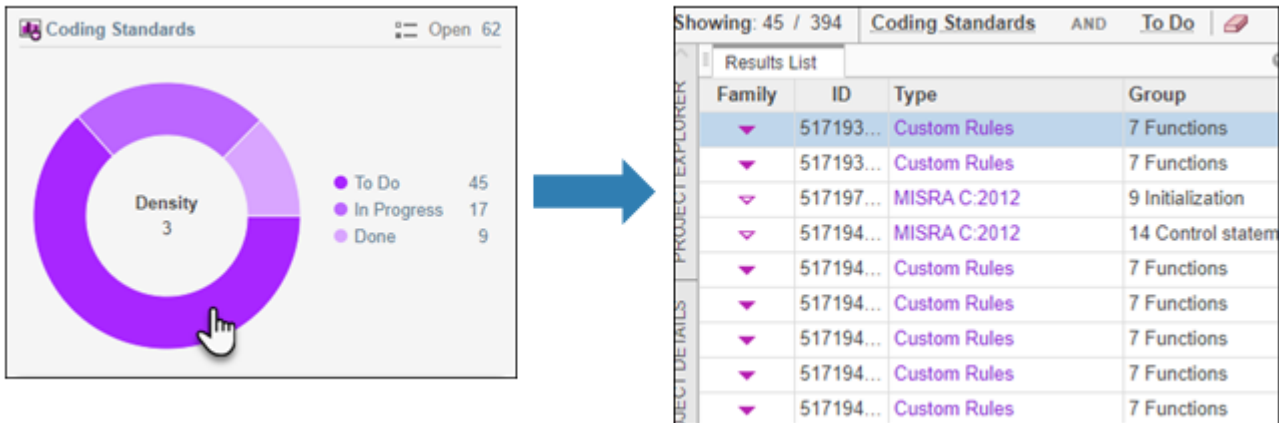
	Category	SQ01	SQ02	SQ03	SQ04	SQ05	SQ06	Exhaus
▾ MISRA C:2004 49/131	–	■	■	■	■	☑	☑	☑
▶ 1 Environment 0/1	–	–	–	–	–	–	–	☑
▶ 2 Language extensions 0/3	–	–	–	–	–	–	–	☑
▶ 3 Documentation 0/1	–	–	–	–	–	–	–	☑
▶ 4 Character sets 0/2	–	–	–	–	–	–	–	☑
▶ 5 Identifiers 1/7	–	☑	☑	☑	☑	☑	☑	☑
▶ 6 Types 1/5	–	–	☐	☐	☐	☑	☑	☑
▶ 7 Constants 0/1	–	–	–	–	–	–	–	☑
▶ 8 Declarations and definitions 3/12	–	■	■	■	■	☑	☑	☑
▶ 9 Initialization 2/3	–	☐	☐	☐	☐	☑	☑	☑
▶ 10 Arithmetic type conversions 2/6	–	☐	☐	☐	☐	☑	☑	☑
▶ 11 Pointer type conversions 4/5	–	■	■	■	■	☑	☑	☑
▶ 12 Expressions 7/13	–	■	■	■	■	☑	☑	☑
▶ 13 Control statement expressions 6/7	–	■	■	■	■	☑	☑	☑
▶ 14 Control flow 4/10	–	■	■	■	■	☑	☑	☑

To make changes to the quality objectives settings, you must have a role of **Administrator**.

Previously, you could not see quality objective statistics for Bug Finder results. See Customize Software Quality Objectives.

Project Dashboard: Open results by clicking Dashboard charts

In R2020a, you can click a section of a pie chart or the legend of a pie chart to open the corresponding findings in the **Results List** and more easily narrow the scope of your review.



Extending Checkers: See example value for defect found with stricter analysis

Summary: In R2020a, if the analysis option **Run stricter checks considering all values of system inputs (-checks-using-system-input-values)** is enabled, for a subset of numerical and static memory defects, you can see an example of values that lead to the detected defect in the **Results Details**.

Integer division by zero (Impact: High) ?

Divisor is 0.

Result includes example values that lead to the defect.

	Event	File	Scope
1	Function called by external code with input 's' Possible input value causing defect: {a=0, b=-2}	test.c	func()
2	Entering function 'func'	test.c	func()
3	Assignment to local variable 'j'	test.c	func()
4	Assignment to parameter 's'	test.c	func()
5	Assignment to local variable 'j'	test.c	func()
6	Integer division by zero	test.c	func()

Source Code

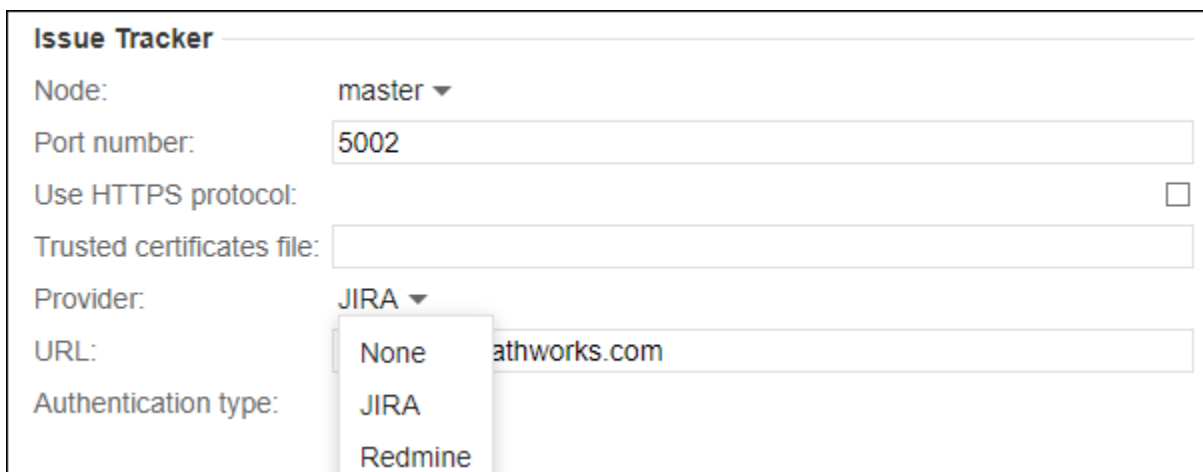
```
test.c x
4     int a;
5     int b;
6
7 } S2;
8
9 int func(S2 s)
10 {
11     int i;
12     int j = 1;
13     s.a += 3;
14     j = j - s.b;
15
16     i = 1024 / (j - s.a);
17
18     return i;
19 }
```

You can use the example values to fix defects in your code that are due to specific system input values.

Installation

Installation and Configuration: New Issue Tracker service

In R2020a, use the new **Issue Tracker** service to configure Polyspace Access to integrate with the Jira software or Redmine bug tracking tools.



The screenshot shows the 'Issue Tracker' configuration window. It contains the following fields and options:

- Node:** A dropdown menu with 'master' selected.
- Port number:** A text input field containing '5002'.
- Use HTTPS protocol:** A checkbox that is currently unchecked.
- Trusted certificates file:** An empty text input field.
- Provider:** A dropdown menu with 'JIRA' selected. A dropdown menu is open below it, showing three options: 'None', 'JIRA', and 'Redmine'.
- URL:** A text input field containing 'athworks.com'.
- Authentication type:** A text input field that is currently empty.

See Configure the **User Manager** and **Issue Tracker**.

Installation and Configuration: Change in default location of Polyspace Access data volume and working directories

In R2020a, the default location of the working directories of the Polyspace Access **Web Server** and **ETL** services and of the data volume is inside the folder where you unzipped the Polyspace Access ZIP file, under the `polyspace` folder.

Previously, the working directories of the **Web Server** and **ETL** were stored in the temporary files folder of your system (`/tmp` on Linux or `%TEMP%` on Windows). The data volume was stored under `/var/lib/docker/volumes` on Linux.

R2019b

Version: 2.1

New Features

Bug Fixes

Installation

User Authentication: Use LDAP search filters to restrict number of users to authenticate

In R2019b, if you use your organization's Lightweight Directory Access Protocol (LDAP) to authenticate users, you can filter for and load a subset of users from your LDAP database when you start Polyspace Bug Finder™ Access™. Previously, you loaded all LDAP users listed under the **LDAP base** that you specified when you started Polyspace Bug Finder Access.

To filter the LDAP users, use the new **LDAP search filter** field in the Cluster Operator settings for the **User Manager** service. For more information, see Use Your Organization LDAP.

User Management: Update list of users from LDAP database or LDIF file

In R2019b, if you remove users from your organization's Lightweight Directory Access Protocol (LDAP) database or from the Polyspace Access embedded LDAP LDIF file, you can update the list of users stored in the Polyspace Access database. Previously, users that were removed from the LDAP database or from the LDIF file were still visible in the list of users you selected when assigning findings or managing project permissions.

To update the list of users stored in the Polyspace Access database, append `/users/list/removed` to the URL that you use to Open the Polyspace Access Web Interface. Only an **Administrator** can perform this operation. For more information, see Manage LDAP Users in Polyspace Access.

R2019a

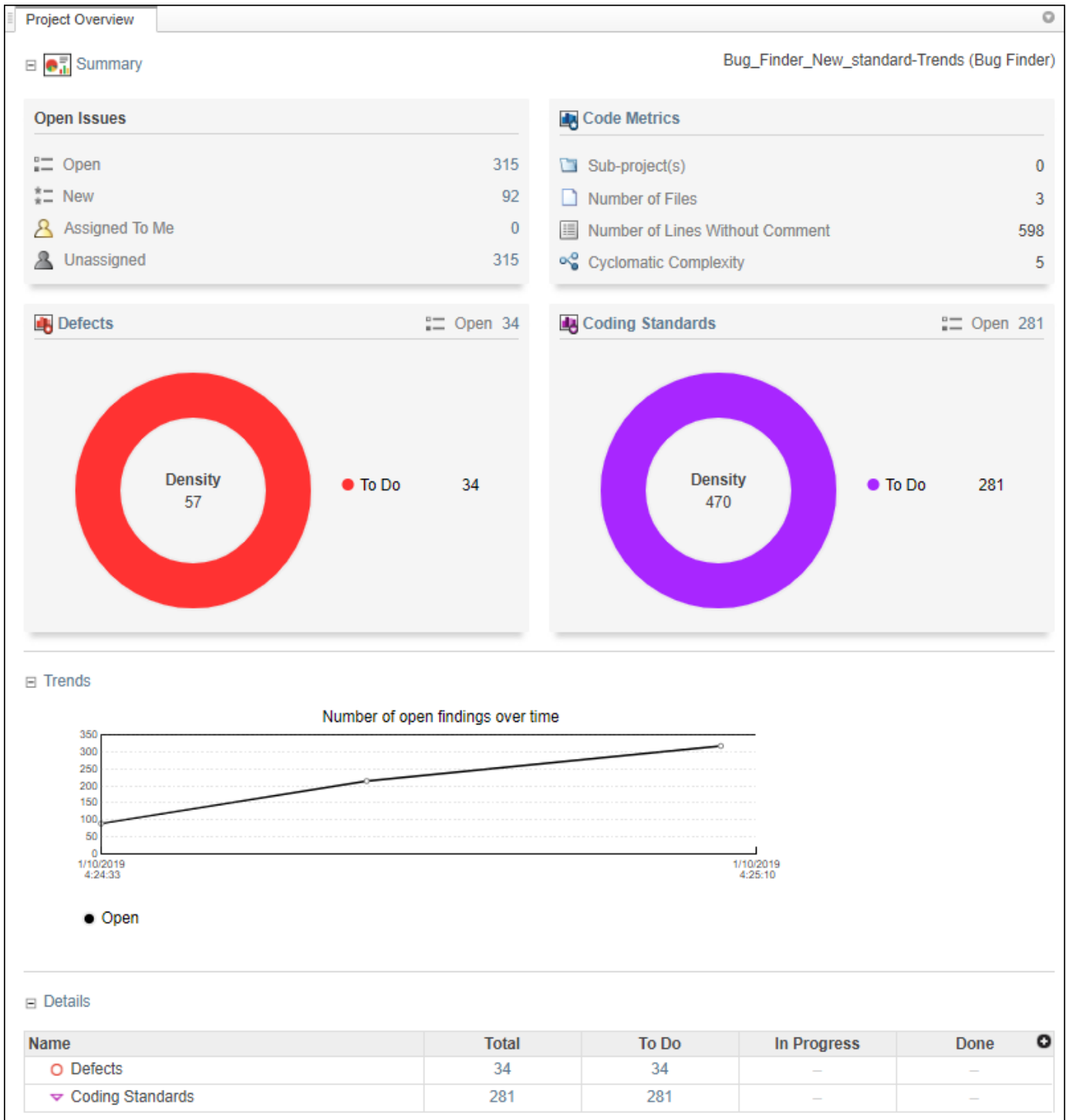
Version: 2.0

New Features

Dashboard and Review in Web Browser

Project Dashboard: Track progress of code quality via Polyspace results

Summary: In R2019a, you can track the progress of the code quality of your projects using the new intuitive Polyspace Bug Finder Access **DASHBOARD**. When an analysis run is uploaded to the Polyspace Access database, the dashboard updates to give a snapshot of the findings, including a progress trend for number of findings compared to previous runs.



Additional Benefits:

- *Prioritize reviews:* See new and open issues that have not been fixed or justified, then open a detailed results list for just those issues. You can drill down on a set of findings filtered by new, open, unassigned, by family of findings, or by file.

- *Aggregate results for multiple projects:* If your team works on multiple projects, move all the projects under an umbrella project and view a snapshot of the code quality for all your team's projects.
- *Authenticate client access:* The web interface is behind a login. Only users with a Polyspace Bug Finder Access license and the appropriate credentials can view the dashboard from their web browser.

Collaborative Review Support: Review Polyspace Bug Finder results and source code in web browser

Summary: In R2019a, review Polyspace analysis findings and view the findings in your source code using the new Polyspace Bug Finder Access **REVIEW** web interface. You do not need to install a Polyspace product on your machine to open and review analysis results.

The screenshot displays a web-based code review interface. At the top, there are navigation tabs for Dashboard, Run-time Checks, Defects, Coding Standards, Code Metrics, and Global Variables. Below these are filters for APPS, FAMILY FILTERS, FILTERS, ENVIRONMENT, and REVIEW. The main content area is divided into two panes. The left pane, titled 'Results List', shows a table of defects with columns for Family, ID, Type, Group, and Check. The right pane, titled 'Result Details', shows the details for a specific defect (ID 40482) with fields for Status (To Fix), Severity (Unset), and Assigned to. Below these fields is a text area for comments and a 'Track issue' button. A yellow warning box highlights the defect: 'Wrong type used in sizeof (Impact: High)'. The bottom pane shows the source code for the file 'programming.c', with a 'Source Code' tab selected. The code shows a function 'bug_ptrsizeofmismatch()' and a corrected version 'corrected_ptrsizeofmismatch()'.

Family	ID	Type	Group	Check
○	40427	Defects	Static memory	Buffer overflo
○	40461	Defects	Programming	Possibly unin
○	40464	Defects	Programming	Invalid use of
○	40482	Defects	Programming	Wrong type u
○	47905	Defects	Programming	Declaration n
○*	47907	Defects	Programming	Typedef misn
○	47910	Defects	Concurrency	Data race
○	47912	Defects	Dynamic memory	Deallocation
○	47922	Defects	Resource management	Resource lea
○	47925	Defects	Static memory	Pointer or ref
○	47928	Defects	Data flow	Non-initialize
○	47934	Defects	Data flow	Non-initialize
○	47937	Defects	Data flow	Non-initialize
○	47959	Defects	Dynamic memory	Use of previo
○	47962	Defects	Dynamic memory	Invalid free of
○	47965	Defects	Numerical	Invalid use of
○	47968	Defects	Numerical	Invalid use of
○	47971	Defects	Numerical	Float convers
○	47974	Defects	Numerical	Integer conve
○	47977	Defects	Numerical	Absorption of
○	47986	Defects	Numerical	Invalid use of
○	48004	Defects	Programming	Character val
○	48007	Defects	Programming	Variable leng
○*	48022	Defects	Programming	Assertion
○	48027	Defects	Programming	Ermo not res
○	48030	Defects	Programming	Invalid use of
○	48032	Defects	Programming	Misuse of err
○	48035	Defects	Programming	Writing to cor
○	48040	Defects	Programming	Possible mist
○	48044	Defects	Programming	Invalid va_list
○	48047	Defects	Resource management	Use of previo
○	48050	Defects	Resource management	Closing previ
○*	48053	Defects	Resource management	Writing to rea
○	48056	Defects	Static memory	Array access
○	48059	Defects	Static memory	Invalid use of
○	48062	Defects	Static memory	Subtraction o
○	48065	Defects	Static memory	Destination b
○	48068	Defects	Static memory	Use of autom

```

130
131
132 /*-----
133 * POINTER SIZEOF MISMATCH
134 *-----
135 void bug_ptrsizeofmismatch() {
136     int k = 5;
137     char* str;
138     str = (char*) malloc(sizeof(char*) * k); /* Defect: Wr
139     read_pchar(str);
140 }
141
142 void corrected_ptrsizeofmismatch() {
143     int k = 5;
144     char* str;
145     str = (char*) malloc(sizeof(char) * k); /* Fix: Correc
146     read_pchar(str);
147 }
148
149
150

```

Additional Benefits:

- *Facilitate collaborative review:* The web interface streamlines the review efforts of your team. For instance:
 - During a team meeting, findings can be assessed and assigned to developers.
 - Developers can log into the web interface to review findings assigned to them, and determine whether to justify the findings or fix them.
 - A project manager can track the progress of the review by filtering the list of results for findings that are still open.

- *Authenticate client access*: The web interface is behind a login. Only users with a Polyspace Bug Finder Access license and the appropriate credentials can view the results from their web browser.

Collaborative Review Support: Share Polyspace Bug Finder results using web links

Summary: In R2019a, you can right-click an analysis result in the Polyspace Bug Finder Access interface to obtain a URL that you can share with other team members. The link that you provide opens the Polyspace Bug Finder Access interface and displays the finding along with the corresponding source code.

The image shows two screenshots of the Polyspace Bug Finder interface. The left screenshot shows a list of defects in the 'RESULTS LIST' table. A right-click context menu is open over the row with ID 61582, showing options like 'Show only: "Defect"', 'Filter out: "Defect"', and 'Copy finding URL to clipboard'. A blue arrow points to the right screenshot, which shows the detailed view of the selected defect (ID 61582). The 'Result Details' panel shows the defect status as 'Unreviewed' and severity as 'Unset'. A warning message indicates a 'Possibly unintended evaluation of expression because of operator precedence rules (Impact: High)'. The 'Contextual Help' panel shows the corresponding source code snippet:

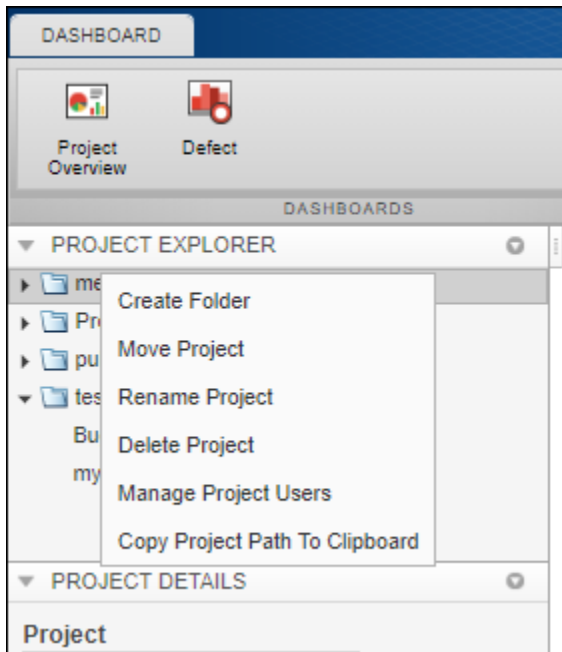
```

593 * OPERATOR PRECEDENCE
594 *-----
595 int bug_operatorprecedence(int
596     int res = a-b;
597     if (a < b & c)
598         res = c;
599

```

Project Authorization Management: Create and enforce authorization policies for access to project

Summary: In R2019a, you can manage project users in Polyspace Bug Finder Access by right-clicking a project in the **PROJECT EXPLORER** and assigning roles to member of your team. The roles authorize or forbid users from viewing projects.

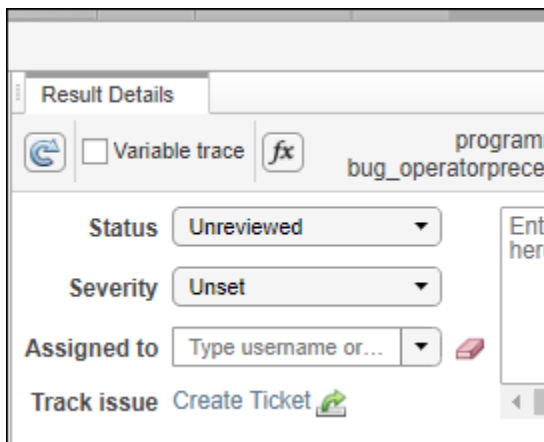


Additional Benefits:

- *Restrict access to your source code:* Use the authorization policy to restrict who can view the source code you upload with your analysis results.
- *Display relevant projects only:* When they log in to Polyspace Access, users can only see projects for which they are administrators, owners, or contributors. Use the authorization policy so that team members only see projects that they are working on.

Bug Tracking Tool Support: Create JIRA issues for Polyspace Bug Finder results

Summary: In R2019a, Polyspace Bug Finder Access supports integration with the JIRA software. If you have an instance of the JIRA software, after you configure Polyspace Bug Finder Access, you can create a JIRA ticket to track Polyspace findings. The ticket is populated with details of the finding and a link to open that finding in Polyspace Access. You can add the ticket to any existing JIRA project.



Once you create a ticket, the **Result Details** pane in the Polyspace Bug Finder Access web interface displays a link to the corresponding JIRA issue.