How do I conduct effective and efficient testing?

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If you have any questions on this topic or you would like to be a contributor to future ServiceNow best practice content, please contact us.

When and why should I test?

Use testing to **make sure your Now Platform® is properly configured to help you achieve your outcomes and to save time and money**. Conduct testing whenever you make changes to the ServiceNow® platform, such as upgrades, patches, hot fixes, or new releases, to:

- **Validate** applications being developed meet your requirements, needs, and expectations
- **Verify** that the applications being developed conform to the specifications defined in user development stories

What are the different types of testing I should conduct?

Story/unit testing	• A unit is the smallest testable software component (e.g., objects, components, modules). • Use unit testing to focus on programming errors, testing units in isolation to verify that the code unit works as required.
System testing	• System testing assesses the system holistically and includes integration testing to make sure the units work together. • Use system testing to verify overall specifications are met and to validate the system works for its intended purpose.
User acceptance testing	• User acceptance testing (UAT), completed by end users, is the final validation stage. • Conduct UAT to get customer/business validation that the platform has been set up correctly to meet business outcomes.

Related resources

- Success Quick Answer – When and how should I use ATF?
- Success Quick Answer – What best practices should I consider when creating ATF tests?
- Now Community post – Getting Started with ATF Guide and Best Practices

How do I conduct effective and efficient testing? (Cont.)

What should I test?

Take a risk-based approach when you determine what to test, starting with the most business-critical items. **Follow these steps to get started**:

1. **Identify your most business-critical processes and applications and choose one.**
2. **Within that application, identify your business-critical flow.**

   For example, for Incidents, choose your top 10–20 user process flows.
3. **Within that application and its process flows, identify your unique configurations.**
4. **Focus your testing on these configurations and what is unique to your instance.**

   Don't try to test everything or out-of-the-box configuration that ServiceNow has already tested.
5. **Use the quick start tests provided by default as guidance for the types of things you should be testing and to jump-start creating your own tests.**

What is the difference between manual and automated testing?

ServiceNow supports both automated and manual testing. Automated testing uses automation tools to execute test cases, while manual test cases are executed by a human tester.

Manual testing	Automated Testing
Manual testing is not always accurate due to human error, making it less reliable.	Automated testing is more reliable since it's performed by tools and/or scripts.
Manual testing is time consuming, taking up human resources.	Automated testing is executed by software tools, so it's significantly faster than a manual approach.
Investment is required for human resources.	Investment is required to install and set up testing tools.
Manual testing is only practical when the test cases are run once or twice and when frequent repetition isn't required.	Automated testing is a practical option when the test cases are run repeatedly over a long time period.
Manual testing allows for human observation, which may be more useful if the goal is user-friendliness or an improved customer experience.	Automated testing does not entail human observation and cannot guarantee user-friendliness or a positive customer experience.

How do I conduct effective and efficient testing? (Cont.)

How do I conduct testing in ServiceNow?

	Manual testing	Automated testing
How to get started:	**Use the ServiceNow Test Management application to create and manage manual software testing.**	**Use the ServiceNow ATF application to create and run automated tests on you ServiceNow instance.** (ATF is used for both implementations and release upgrades)
When to use:	**Exploratory testing –** Requires the tester's knowledge, experience, analytical/logical skills, creativity, and intuition. Human skills are needed to execute the testing process due to limited specification documentation, and/or a short time for execution. **Usability testing –** Measures how user friendly, efficient, or convenient the software or product is for end users. Here, human observation is the most important factor, so a manual approach is preferable. **Ad hoc testing –** An unplanned method of testing where the understanding and insight of the tester is the only important factor.	**Regression testing –** Running tests that have been run before, using a standardized, repeatable process. Automated testing reduces testing time and cost. **Repeated execution –** Testing that requires the repeated execution of a task is best automated.