7 questions to ask before upgrading your Oracle database

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Before you dive too deeply into your Oracle database upgrade, consider these seven questions.

If you're looking to upgrade soon to Oracle Database 12*c*, congratulations! You're making a wise choice. You'll have access to dozens of new features, including database in-memory for faster analytics, automatic data optimization for more effective storage usage, a multitenant database architecture, and enhanced security, just to name a few advanced features of 12*c*.

But there's still a lot of things to think about to ensure a smooth transition. Before you dive too deeply into your upgrade, consider these seven questions.

1. Do you fully understand the differences between your current version of Oracle database and the new one?

You can find tons of information online about the most attractive features of 12*c*, but how many of them apply to your company's precise needs?

One way to figure that out is to get your DBAs recertified on Oracle 12*c*. The upgrade's new capabilities number in the hundreds — but how can you be sure which ones will help your company? Getting them to coordinate with your current database version will be tricky.

12c-certified DBAs can take their knowledge of your current structure and apply it to everything they learn in recertification classes. Without this level of expertise, you're at risk of flying blind into an extremely complex process.

2. Will you be able to do a direct upgrade?

A direct upgrade automates the upgrade process, dramatically reducing the potential for human error. These Oracle database versions support direct upgrades:

> 11*g* Release 2 (Version 11.2.0.2 and later).

> 11*g* Release 1 (Version 11.1.0.7).

> 10*g* Release 2 (Version 10.2.0.5).

But these versions do not support direct upgrades:

> 11.2.0.1.

> 11.1.0.6.

> 10.2.0.4 and earlier.

You cannot directly upgrade if your database version is earlier than 10*g*. If you can't do direct upgrades, you have to use more complex methods. Again, this requires advanced expertise to migrate and/or transform your current database version to the latest version.

3. Which upgrade method is best for your database?

Choosing an upgrade method will depend on your current database version, the expertise level of your DBAs and their preference for conducting upgrades, and – most importantly – how much application downtime your upgrade method will require.

The two direct upgrade methods are:

> Database Upgrade Assistant (DBUA), which uses a graphical interface to guide the DBA through the process.

> Command-line upgrade script, which gives the DBA more flexibility and control over the process.

DBUA and command-line scripts are the fastest options; DBUA is the less-complex choice. Both of these have a minimum source version of 10.2.0.5.

If you cannot use direct upgrade, you'll have to use database migration methods that take on much more complexity. That may not be an issue if you have the technical expertise, but if you lack that expertise, you're going to need help.

4. Where will your new install live?

You cannot place your new database software in the same location as the old version. That means you have to create a new place to install Version 12c.

You want a separate location to ensure you can keep your existing database install while adding the new one. This allows you to create a test database you can optimize before you move all your production processes over to the new database. (And if your databases' current version is Oracle 11gR2 and you're using Oracle Grid Infrastructure (GI), you'll need to think carefully about the implications of upgrading GI as well.)

5. How will you test your new database?

High-quality testing dramatically reduces the likelihood of upgrade glitches that affect your entire business. These tests require rigorous execution and successful results. How will your organization build and execute these test plans to insure against any possible application performance regression?

6. What is your backup plan?

A backup plan must be well thought out to accommodate potential risks. While you can't test for every eventuality and inevitability, you don't want to be in a situation where the one thing that you didn't test for ends up torpedoing your upgrade.

The best approach is to develop a sophisticated backup strategy that:

> Determines the maximum downtime your business can tolerate.

> Provides a safe off-site location for storage.

> Accurately estimates how soon you can restore backups.

> Performs robust testing of backup and recovery scenarios.

No matter how good your upgrade plan is, there's always a chance of things going wrong. If you don't have a strong backup plan, you're practically begging things to go from bad to worse.

7. Should you work with an Oracle partner?

Upgrading to Oracle 12*c* can make a lot of things go right for your IT organization. But a lot can go wrong if you have any gaps in your Oracle expertise.

Systems Integrators who specialize in Oracle technology can help close those gaps by:

> Accelerating implementation timelines. 12*c* experts can anticipate the glitches you would find out about the hard way — so you can start reaping the benefits of your upgrade far sooner than you ever could on your own.

> Reducing project risk. 12*c* experts also can dramatically shrink the likelihood of an upgrade causing a serious, expensive disruption to your business.

A select number of Systems Integrators have earned Oracle Partner status, which means they specialize in helping companies fine-tune their databases to their precise specifications. The most trusted Oracle Partners have all the latest certifications and years of experience performing database installs, upgrades and migrations.

Why OnX?

OnX is an Oracle Platinum Partner, which places us among the best of the best of all Oracle Systems Integrators. But there are hundreds of platinum partners out there. What makes us different?

We start by learning Oracle technology inside and out. We're passionate about its possibilities, and we jump at the challenge of putting it to work for people. In fact, our Oracle team includes an Oracle ACE Director, which is the highest recognition that Oracle Corporation grants to its partners for understanding how to best leverage Oracle technology to solve their clients' business problems.

To get started:

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