

2020 UNC Peer Institution Study

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University of North Carolina System Chapel Hill, North Carolina

Introduction

When the University of North Carolina (UNC) was redesignated in 1972 to include all 16 public four-year institutions of higher education, one of the primary responsibilities given to the Board of Governors (BOG) was to "...foster the development of a well-planned and coordinated system of higher education." One of the key activities the BOG oversees in the execution of this responsibility is periodically updating institutional peer lists. A peer list is a collection of similar institutions that can be used to facilitate objective and useful comparisons and benchmarking for the constituent universities.

The American higher education system is the largest and broadest in the world, with roughly 5,000 colleges and universities varying in size (from institutions with fewer than 100 students to those with nearly 70,000), mission (e.g. liberal arts, religious, special focus, comprehensive, research), control (public, private non-profit, private for-profit), and degree-granting authority (associate, baccalaureate, master's, doctorate). Institutional missions vary by the student population served, and institutions differ in the amount of resources they have available to them.

Given the breadth and diversity of institutions in the United States, it is impracticable and unproductive to compare any given college or university against all other institutions of higher education. As such, institutions and governing boards have relied upon the identification of smaller sets of institutions to provide a more focused and concise perspective for comparisons. These peer lists provide institutions with a single collection of universities to be used for benchmarking and comparison, and provides an objective point of review and departure for institutional strategic planning.

The UNC System mirrors the larger tapestry of higher education in American with regards to the diversity of its institutions. Unlike many other systems of higher education, the UNC System is comprised of a heterogeneous mix of institutions that differ in mission, size, degree focus, and student body served. As such, the historical use of peer sets has allowed the UNC Board of Governors to examine the positioning and performance of each constituent institution within a group of similarly situated colleges and universities. This facilitates more accurate and more effective assessments and comparisons.

Within the UNC System, the Board of Governors has responsibility for reviewing and approving all institutional peer lists. The peer institution lists have historically been consulted for analyses, including, but not limited to: tuition and fees, retention and graduation rates, degree production, research productivity, space utilization, private fundraising and endowments, student financial aid, institutional revenues, and the distribution of institutional expenses.

The UNC System has historically updated peer institutions roughly every five years, with the two most recent studies occurring in 2006 and 2011. A great deal has changed for both American higher education in general and for UNC System institutions specifically since 2011. As such, the 2020 Peer Study is critically important to ensure that each constituent university has a current and accurate peer set in place.

The remainder of this report provides an overview of the conceptual approach taken in development of the peer sets, the methodological approach that was applied, and a discussion of recommended uses and time limits for the peer sets. The report concludes with the recommended peer lists for each constituent institution.

Conceptual Approach

The UNC System has used a variety of approaches in conducting previous peer studies. The 2006 peer study was outsourced to Dennis Jones, President of the National Center for Higher Management Systems (NCHEMS). This process helped ensure an objective and consistent perspective, but lacked documentation on the specific details considered. The 2011 peer study was conducted internally, but quantitative analysis was delegated to the individual institutions. This allowed for a better understanding of the deliberations, but resulted in a less consistent approach, as larger institutions with more robust institutional research operations were able to conduct more sophisticated modeling than smaller institutions. Previous peer studies have also varied in their intended usage; some were designed to identify similar institutions for outcomes evaluations, while some were constructed to identify universities that were aspirational. At times it was unclear which was of these was the driving objective.

The 2020 peer study has been constructed so that the analyses are objective, consistent, and clearly understood. The work has also been clearly focused on identifying peer sets that are composed of realistic and accurate sets of institutions that can be used for current benchmarking and outcomes analyses. This has been a highly collaborative and consultative process, with responsibility shared by the UNC System Office and the individual institutions. To that end, each UNC System university was asked to identify one individual to serve as the primary point of contact who had the institutional standing and knowledge to guide their campus process. Additionally, each university established an internal working group composed of individuals to participate in the working process. This typically included individuals from Academic Affairs, Institutional Research, Finance, Human Resources, and representatives of Faculty and Staff Councils and Senates. The UNC System Office developed a parallel internal steering group led by Academic Affairs, including representatives from Data and Analytics, Strategy and Policy, Finance, Human Resources, the chief of staff, and the chief operating officer. Identification of the methodological approach, variable identification, and ultimate peer selection was conducted in a collaborative manner, involving individuals from the UNC System Office and each constituent university.

Methodological Approach

A guiding objective of the 2020 peer study was to employ a quantitative and data-driven approach to identify institutional peers that would be consistent across institutions. To that end, and as opposed to previous iterations of peer studies, UNC System Office staff from Data and Analytics conducted all quantitative analyses for the 16 constituent universities. This ensured a common approach was used in the consideration of peers for all institutions, and also helped to ameliorate the differences in resources that exist across the constituent institutions.

The first step in the process was to identify a methodology. Following discussions, cluster analysis was selected as the quantitative approach, as it allows for institutions to be compared simultaneously across a variety of variables. Next, individual variables were identified for use in the cluster analysis. A cluster analysis was then run for each institution, and output lists were provided to the institutions for review. Institutions were allowed to identify colleges and universities that they felt should be included on their peer list, but which were not included in the cluster analysis. This typically included institutions for which there was a historical connection on peer studies or similar academic focus. Institutions subsequently provided a list of proposed peers, which were reviewed by the UNC System Office steering committee. A final proposed list was then negotiated by each institution and the UNC System Office.

Variable Identification

Potential variables were identified by staff from the UNC System Office and the individual institutions, and were ultimately approved by the UNC System Office steering group. Given that the desired objective of the peer study was to identify lists that could be used for outcomes assessment, the majority of the variables identified were measures of institution resources and mission. Variables fall into one of three broad categories: those that help understand an institution's mission and positioning (e.g. academic program mix, undergraduate enrollment as a percent of total enrollment); the study body an institution serves (e.g. total student enrollment, percent of undergraduate students receiving a Pell Grant); and institutional resources (e.g. percent of faculty that are full-time, instructional expenditures per student FTE). It was decided that ten variables would be used in each cluster analysis. Of those ten, six would be common to all institutions, and four would be selected by the individual institution in consultation with the UNC System Office. A full list of the variables is provided below.

Variables Used in the Cluster Analysis

- 12-month Enrollment Full-Time Equivalent (FTE), (Core Variable)
- Percent of Undergraduate Students Receiving a Pell Grant, (Core Variable)
- Undergraduate Enrollment as a Percent of Total Enrollment, (Core Variable)
- Academic Program Mix, (Core Variable)
- Percent of Faculty Who are Full-Time, (*Core Variable*)
- Instructional Expenditures per Student FTE, (Core Variable)
- Percent of Undergraduate Students Who are Part-Time, (Elective Variable)
- Percent of Undergraduate Students Who are Transfers, (Elective Variable)
- Percent of Undergraduate Students Who are 25 and older, (Elective Variable)
- Percent Underrepresented Minority Student Enrollment, (Elective Variable)
- ACT Composite Score 75th Percentile (*Elective Variable*)
- Percent Five-Year Change in FTE Enrollment (Elective Variable)
- Percent of Faculty Who are Tenured or Tenure-Track (*Elective Variable*)
- Average Full Professor Salary (*Elective Variable*)
- Research Expenditures per FTE (Elective Variable)
- Public Service Expenditures per FTE (Elective Variable)
- Core Operational Revenue per FTE (Tuition & Fees Discounts & Allowances, + State Appropriations), (Elective Variable)
- Endowment per Student FTE, (Elective Variable)

Cluster Analysis

The analysis started with all institutions who reported data to the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS) as a basis for selection. As UNC is a system of four-year public universities, the analysis excluded private institutions and institutions that do not offer bachelor's degrees. Of the ten variables evaluated, five were pre-determined, one was semi-custom, and four were selected by the institution. Using these ten variables, analysts assessed the distribution of values across the aforementioned list of public universities. In cases where an institution had a missing response for one of the ten variables, that institution was removed from the evaluation dataset. There are instances where it might be desirable to include a missing response, which can be evaluated in a future iteration. All variables' values were scaled to prevent skewing the results towards those variables with large values. Depending on the distribution of values, steps were taken to normalize/standardize the spread within each variable. Additional data manipulations were conducted, particularly for the financial variables, to correct for skewness in the distribution. Rather than identifying and removing

institutions with single-variable outliers prior to clustering, a large k-means cluster analysis was used to identify outliers in the data. Using this process, outliers ended up in clusters by themselves. Once identified, outlier institutions were removed from the evaluation dataset, and the remaining institutions were re-standardized. A new k-means cluster analysis was run using an appropriate k-based value based on model measures and other key assessment criteria, such as the number and geographic diversity of in-cluster institutions. A final list of in-cluster institutions was produced for institutional review and discussion. A single peer list was identified for each institution, with between 10 and 12 institutions included. Given the focus on outcomes benchmarking, inclusion of aspirational and private peers was limited compared to previous peer studies.

Recommended Uses and Timeline

The proposed peer sets were developed first and foremost for current benchmarking and comparisons. Accordingly, it is recommended that these peer lists serve as the basis of analysis for outcomes assessment on areas such as student retention rates, graduation rates, degree production, research productivity, and other relevant metrics, particularly those associated with the UNC System Strategic Plan, *Higher Expectations*.

In the past, the peer sets have served as the primary comparison group for faculty salaries. This has limited the efficacy of those comparisons, as the peer sets do not represent a full competitive employment market. As such, moving forward, peer sets will not be used as the primary source of analysis for faculty salaries. The UNC System Office is currently developing a Faculty Salary Analysis Tool (FacSAT), which will serve as a more robust and comprehensive platform for conducting faculty salary analyses in the future.

Finally, there were significant concerns that the peer sets have not been updated in nine years. As such, the new peer sets will be used between the date adopted by the BOG and June 30, 2025. Therefore, the next peer study will be conducted in the 2024-2025 academic year, with an implementation date of July 1, 2025.

Proposed Peers

The following pages contain the proposed peer sets for each of the UNC System constituent universities. For each peer institution the following information is provided: name of institution, state the institution is located in, whether or not the peer was identified through the cluster analysis, whether or not the peer was included on the 2011 list, and whether or not the peer was included on the 2006 list. Some lists are more stable across studies than others, which reflects a fairly mature institutional comparison set. Other lists have changed dramatically, given either growth and development of the individual constituent institution or similar changes in the comparison set. Similar to previous peer studies, the UNC-Chapel Hill list includes ten public institutions and five private institutions; the UNC School of the Arts list includes six public institutions and six private institutions; the UNC Asheville list contains ten public institutions and two private institutions; and the Elizabeth City State list includes ten public institutions and one private institution. For those universities, the private institutions will factor into analyses of outcomes measures such as retention and graduation rates, but do not factor into considerations of tuition and fees.

Appalachian State University

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
California Polytechnic State University-San Luis Obispo	CA	Yes	No	No
Grand Valley State University	MI	Yes	No	No
Bowling Green State University-Main Campus	ОН	Yes	Yes	Yes
Miami University-Oxford	ОН	Yes	Yes	Yes
Indiana University of Pennsylvania-Main Campus	PA	Yes	Yes	No
West Chester University of Pennsylvania	PA	Yes	Yes	Yes
College of Charleston	SC	Yes	Yes	Yes
James Madison University	VA	Yes	Yes	Yes
Western Washington University	WA	Yes	Yes	Yes
Western Michigan University	MI	No	No	No

10 Total Peers

7 Peers were included on 2011 List

6 Peers were included on 2006 List

1 Peer Off-Cluster

O Private Peers

East Carolina University

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
Illinois State University	IL	Yes	No	No
Ball State University	IN	Yes	No	No
Central Michigan University	MI	Yes	Yes	No
Western Michigan University	MI	Yes	Yes	Yes
University of Nevada-Las Vegas	NV	Yes	No	No
Utah State University	UT	Yes	No	No
Washington State University	WA	Yes	No	No
Northern Arizona University	AZ	No	No	No
Florida Atlantic University	FL	No	No	No
Ohio University-Main Campus	ОН	No	Yes	Yes
Kent State University at Kent	ОН	No	No	No

¹¹ Total Peers

0 Private Peers

³ Peers were included on 2011 List

² Peers were included on 2006 List

⁴ Peers Off-Cluster

Elizabeth City State University

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
Bowie State University	MD	Yes	Yes	No
Coppin State University	MD	Yes	No	No
Mississippi Valley State University	MS	Yes	No	No
Lincoln University	PA	Yes	No	No
South Carolina State University	SC	Yes	No	No
Norfolk State University	VA	Yes	Yes	No
Virginia State University	VA	Yes	Yes	No
Florida Memorial University	FA	No	No	No
Frostburg State University	MD	No	Yes	No
Delta State University	MS	No	No	No
Christopher Newport University	VA	No	Yes	Yes

- 11 Total Peers
- 5 Peers were included on 2011 List
- 1 Peer was included on 2006 List
- 4 Peers Off-Cluster
- 1 Private Peer

Fayetteville State University

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
University of Arkansas at Pine Bluff	AR	Yes	No	No
Fort Valley State University	GA	Yes	No	No
Savannah State University	GA	Yes	No	No
Grambling State University	LA	Yes	Yes	No
Alcorn State University	MS	Yes	No	No
Prairie View A&M University	TX	Yes	No	No
Norfolk State University	VA	Yes	Yes	No
Virginia State University	VA	Yes	Yes	No
Alabama State University	AL	No	No	No
Lincoln University	PA	No	No	No

- 10 Total Peers
- 3 Peers were included on 2011 List
- 0 Peers were included on 2006 List
- 2 Peers Off-Cluster
- 0 Private Peers

North Carolina A & T State University

		Cluster	2011	2006
Institution	State	Analysis*	Peer	Peer
Florida Agricultural and Mechanical University	FL	Yes	Yes	Yes
The University of Louisiana at Lafayette	LA	Yes	Yes	No
University of Maine	ME	Yes	Yes	Yes
Montana State University	MT	Yes	No	Yes
New Mexico State University-Main Campus	NM	Yes	Yes	No
South Dakota State University	SD	Yes	Yes	Yes
The University of Texas at El Paso	TX	Yes	Yes	Yes
Wichita State University	KS	No	No	No
University of Southern Mississippi	MS	No	No	No
North Dakota State University-Main Campus	ND	No	No	Yes
Old Dominion University	VA	No	Yes	No

11 Total Peers

- 7 Peers were included on 2011 List
- 6 Peers were included on 2006 List
- 4 Peers Off-Cluster
- O Private Peers

North Carolina Central University

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
Alabama State University	AL	Yes	No	No
Delaware State University	DE	Yes	No	No
Bowie State University	MD	Yes	No	No
Morgan State University	MD	Yes	Yes	No
Jackson State University	MS	Yes	Yes	No
Tennessee State University	TN	Yes	Yes	Yes
Texas A&M University-Kingsville	TX	Yes	No	No
Norfolk State University	VA	Yes	No	No
Virginia State University	VA	Yes	No	No
New Jersey City University	NJ	No	Yes	Yes

- 10 Total Peers
- 4 Peers were included on 2011 List
- 2 Peers were included on 2006 List
- 1 Peer Off-Cluster
- 0 Private Peers

^{*} Two cluster models were used to develop NC A&T's proposed list.

North Carolina State University

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
University of Arizona	AZ	Yes	Yes	No
University of California-Davis	CA	Yes	Yes	Yes
University of Florida	FL	Yes	Yes	Yes
Georgia Institute of Technology-Main Campus	GA	Yes	Yes	Yes
University of Illinois at Urbana-Champaign	IL	Yes	Yes	Yes
University of Maryland-College Park	MD	Yes	Yes	Yes
Michigan State University	MI	Yes	Yes	Yes
Rutgers University-New Brunswick	NJ	Yes	Yes	No
Texas A&M University-College Station	TX	Yes	Yes	Yes
Virginia Polytechnic Institute and State University	VA	Yes	Yes	Yes
University of Wisconsin at Madison	WI	Yes	Yes	Yes
Purdue University-Main Campus	IN	Yes	Yes	Yes

- 12 Total Peers
- 12 Peers were included on 2011 List
- 10 Peers were included on 2006 List
- 0 Peers Off-Cluster
- O Private Peers

University of North Carolina at Asheville

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
St. Mary's College of Maryland	MD	Yes	Yes	Yes
Massachusetts College of Liberal Arts	MA	Yes	Yes	Yes
University of Minnesota-Morris	MN	Yes	Yes	Yes
Ramapo College of New Jersey	NJ	Yes	Yes	Yes
SUNY College at Geneseo	NY	Yes	Yes	Yes
SUNY at Purchase College	NY	Yes	Yes	No
Christopher Newport University	VA	Yes	Yes	No
University of Mary Washington	VA	Yes	No	Yes
The University of Virginia's College at Wise	VA	Yes	No	No
New College of Florida	FL	Yes	Yes	Yes
The College of Wooster	ОН	No	No	No
Furman University	SC	No	Yes	Yes

- 12 Total Peers
- 9 Peers were included on 2011 List
- 8 Peers were included on 2006 List
- 2 Peers Off-Cluster
- 2 Private Peers

University of North Carolina at Chapel Hill

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
University of California-Berkeley	CA	Yes	Yes	Yes
University of California-Los Angeles	CA	Yes	Yes	Yes
University of Florida	CA	Yes	No	Yes
University of Illinois at Urbana-Champaign	IL	Yes	No	Yes
University of Michigan-Ann Arbor	MI	Yes	Yes	Yes
University of Pittsburg-Pittsburgh Campus	PA	Yes	Yes	Yes
The University of Texas at Austin	TX	Yes	Yes	Yes
University of Washington-Seattle Campus	WA	Yes	Yes	Yes
University of Wisconsin-Madison	WI	Yes	Yes	Yes
University of Virginia-Main Campus	VA	No	Yes	Yes
Emory University	GA	No	No	Yes
Northwestern University	IL	No	Yes	No
Johns Hopkins University	MD	No	Yes	Yes
Duke University	NC	No	Yes	Yes
Vanderbilt University	TN	No	No	No

- 15 Total Peers
- 11 Peers were included on 2011 List
- 13 Peers were included on 2006 List
- 6 Peers Off-Cluster
- 5 Private Peers

University of North Carolina at Charlotte

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
Northern Arizona University	AZ	Yes	No	No
San Diego State University	CA	Yes	No	Yes
Florida Atlantic University	FL	Yes	Yes	No
University of Nevada-Las Vegas	NV	Yes	Yes	Yes
Portland State University	OR	Yes	Yes	Yes
University of Houston	TX	Yes	No	No
The University of Texas at San Antonio	TX	Yes	Yes	Yes
George Mason University	VA	Yes	No	Yes
Old Dominion University	VA	Yes	Yes	No
Indiana University-Purdue University-Indianapolis	IN	No	No	No
University of Massachusetts-Lowell	MA	No	Yes	Yes
University of Maryland-Baltimore County	MD	No	No	Yes

- 12 Total Peers
- 6 Peers were included on 2011 List
- 7 Peers were included on 2006 List
- 3 Peers Off-Cluster
- O Private Peers

University of North Carolina at Greensboro

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
Northern Arizona University	ΑZ	Yes	No	No
San Diego State University	CA	Yes	No	No
Florida Atlantic University	FL	Yes	No	Yes
Portland State University	OR	Yes	Yes	Yes
Texas State University	TX	Yes	No	No
The University of Texas at San Antonio	TX	Yes	No	No
University of Massachusetts-Boston	MA	No	No	No
University of Nevada-Las Vegas	NV	No	No	No
University of Memphis	TN	No	Yes	No
University of Wisconsin-Milwaukee	WI	No	No	Yes

- 10 Total Peers
- 2 Peers were included on 2011 List
- 3 Peers were included on 2006 List
- 4 Peers Off-Cluster
- O Private Peers

University of North Carolina at Pembroke

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
Northwestern State University of Louisiana	LA	Yes	No	No
Frostburg State University	MD	Yes	Yes	No
SUNY Buffalo State	NY	Yes	No	No
Francis Marion University	SC	Yes	Yes	No
Lander University	SC	Yes	No	No
Austin Peay State University	TN	Yes	Yes	Yes
Virginia State University	VA	Yes	No	No
University of Wisconsin-Parkside	WI	Yes	No	No
Middle Georgia State University	GA	Yes	No	No
Eastern New Mexico University-Main Campus	NM	No	Yes	No
Northeastern State University	OK	No	Yes	Yes

- 11 Total Peers
- 5 Peers were included on 2011 List
- 2 Peers were included on 2006 List
- 2 Peers Off-Cluster
- O Private Peers

University of North Carolina at Wilmington

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
California Polytechnic State University-San Luis Obispo	CA	Yes	Yes	Yes
University of California-Santa Cruz	CA	Yes	No	No
University of Maryland-Baltimore County	MD	Yes	Yes	No
University of Massachusetts-Lowell	MA	Yes	No	No
Rowan University	NJ	Yes	Yes	Yes
Binghamton University	NY	Yes	Yes	No
Ohio University-Main Campus	ОН	Yes	No	No
University of Rhode Island	RI	Yes	No	No
The University of Montana	MT	No	No	No
University of South Dakota	SD	No	No	No
College of William and Mary	VA	No	Yes	No
Western Washington University	WA	No	Yes	Yes

- 12 Total Peers
- 6 Peers were included on 2011 List
- 3 Peers were included on 2006 List
- 4 Peers Off-Cluster
- O Private Peers

University of North Carolina School of the Arts

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
Massachusetts College of Art and Design	MA	Yes	Yes	Yes
SUNY at Purchase College	NY	Yes	Yes	Yes
University of California-Los Angeles	CA	No	Yes	No
California Institute of the Arts	CA	No	No	Yes
Savannah College of Art and Design	GA	No	Yes	Yes
Indiana University-Bloomington	IN	No	No	No
Berklee College of Music	MA	No	No	No
The Juilliard School	NY	No	Yes	Yes
New York University	NY	No	Yes	No
University of Cincinnati-Main Campus	ОН	No	Yes	No
Carnegie Mellon University	PA	No	Yes	No
The University of Texas at Austin	TX	No	Yes	No

- 12 Total Peers
- 9 Peers were included on 2011 List
- 5 Peers were included on 2006 List
- 10 Peers Off-Cluster
- 6 Private Peers

Western Carolina University

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
University of Central Arkansas	AR	Yes	No	No
University of Colorado-Colorado Springs	CO	Yes	No	No
University of North Florida	FL	Yes	No	No
Indiana State University	IN	Yes	No	No
Western Kentucky University	KY	Yes	No	Yes
Ferris State University	MI	Yes	No	No
Saint Cloud State University	MN	Yes	Yes	No
University of Central Oklahoma	OK	Yes	No	No
The University of Tennessee-Chattanooga	TN	Yes	No	No
Central Washington University	WA	Yes	No	No
Eastern Washington University	WA	Yes	No	No
Western Illinois University	IL	No	Yes	No

- 12 Total Peers
- 2 Peers were included on 2011 List
- 1 Peer was included on 2006 List
- 1 Peer Off-Cluster
- O Private Peers

Winston-Salem State University

		Cluster	2011	2006
Institution	State	Analysis	Peer	Peer
Alabama State University	AL	Yes	No	No
Delaware State University	DE	Yes	Yes	No
Eastern Illinois University	IL	Yes	No	No
Western Illinois University	IL	Yes	No	No
Coppin State University	MD	Yes	No	No
University of Maryland Eastern Shore	MD	Yes	Yes	Yes
SUNY College at Potsdam	NY	Yes	No	No
Francis Marion University	SC	Yes	Yes	No
South Carolina State University	SC	Yes	No	No
Tennessee State University	TN	Yes	Yes	No
Norfolk State University	VA	Yes	Yes	No
Virginia State University	VA	Yes	Yes	No

- 12 Total Peers
- 6 Peers were included on 2011 List
- 1 Peer was included on 2006 List
- 0 Peers Off-Cluster
- O Private Peers